HYGEIA

THE HEALTH MAGAZINE

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WHO'S WHO IN SEPTEMBER

DR. MAX SEHAM has made a special study of fatigue in children and has written widely on the subject. DR. WILLIAM M. GARDNER writes on mouth hygiene as a result of many years of experience in dentistry. CATHERINE B. ELY is a patron of the arts. GRACE MARIAN SMITH is a writer on household economics topics.

DR. THURMAN B. RICE, a frequent contributor to HYGEIA, is assistant professor of sanitary science at the University of Indiana medical school. DR. SMILEY BLANTON and MARGARET GRAY BLANTON, eminent child psychologists, continue their series on child guidance.

DR. CLARENCE W. LIEB made the study of the diet and nutrition of Vilhjalmur Stefansson, the Arctic explorer, which was commented on in HYGEIA for August. DR. ANNA ROSS LAPHAM is an obstetrician. DR. DONALD E. BELL is connected with the Indiana Village for Epileptics.

DR. ARTHUR J. CRAMP, director of the bureau of investigation of the American Medical Association, is a member of the editorial advisory board of HYGEIA. DR. EDWARD JACKSON, a frequent contributor to HYGEIA, is a member of the joint committee of the American Medical Association and the National Education Association.

DR. LOUIS W. SAUER specializes in diseases of children. KATHERINE BLUNT is chairman of the department of home economics of the University of Chicago. DR. CLIFFORD B. FARR is a member of the Pennsylvania mental hygiene committee of the public charities association. ELIZABETH BLAINE JENKINS contributes another health story for children.

From Kindergarten to College

OCTOBER brings the annual educational number of HYGEIA. *This year it will contain fourteen articles of direct interest to parents and teachers of children from kindergarten to college age. This will be in addition to the usual general health material.*

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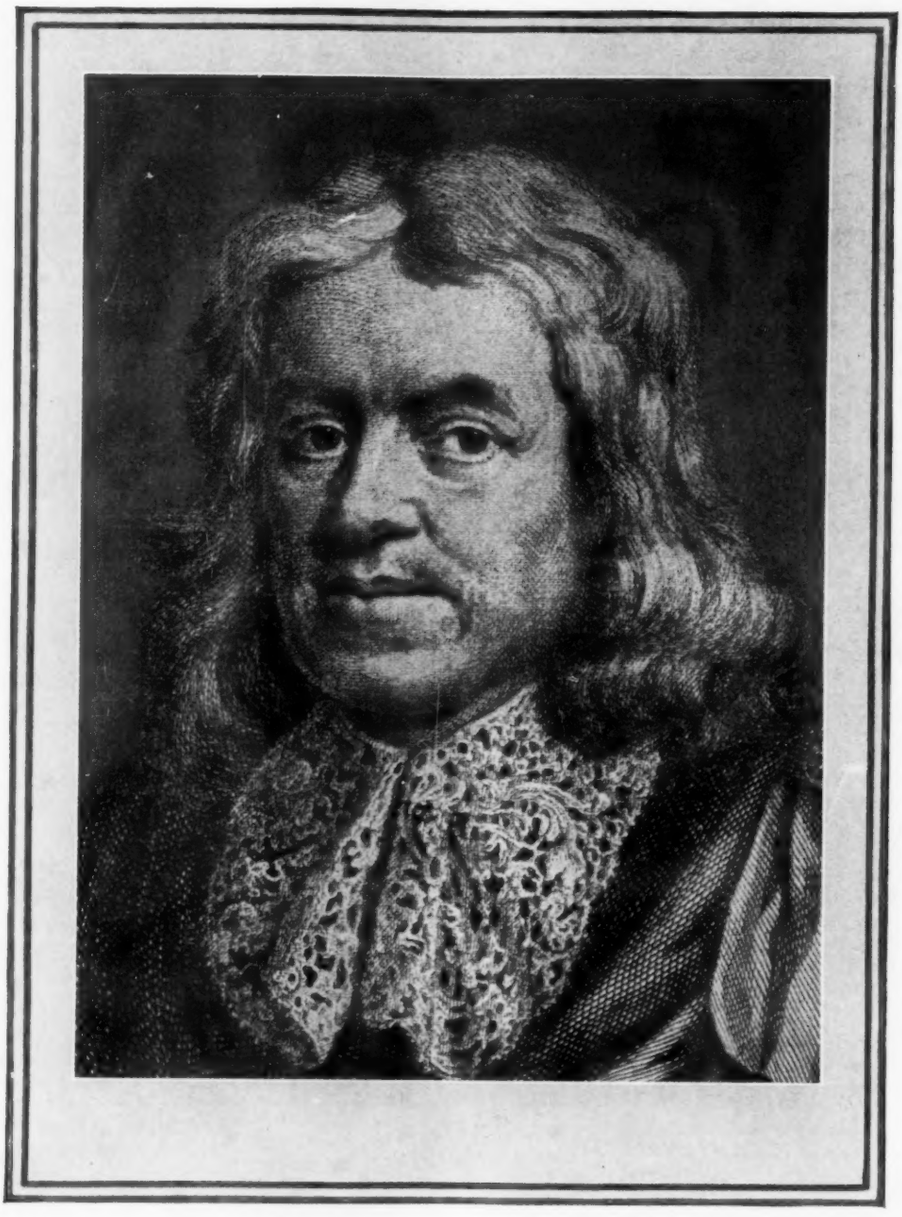


HEROES OF MEDICINE

VI. Thomas Sydenham

THOMAS SYDENHAM, born in England in 1624, lived during an age of civil and religious strife, and this is thought to have influenced his professional work, study for which was carried on, with some interruptions, in both England and France. Certainly he had acquired, either from his Puritan ancestry or from his taste of military activity, an independent spirit that prevented his following the prevailing style of medical practice. In fact, Sydenham was rather contemptuous of all physicians save Hippocrates, who was his ideal and model. He was essentially a man of action, caring nothing for theory; his method was to watch by the bedside, carefully observing and recording all symptoms.

The results of these observations he published, together with his diagnoses and treatments. While the treatments have long since been discarded, his detailed descriptions of many common diseases, especially scarlet fever, hysteria, gout and chorea, for many years formed the basis for the diagnosis and study of these diseases.

In his extreme sympathy and consideration of his patients; in his conservative treatment, relying more on nature and less on drugs; and in his practice of advising moderation, fresh air and a regular life, Sydenham approached the modern physician more nearly than any man up to his time. He died in 1689.

H. Armstrong Roberts

Why the Child *Needs* Play

By Max Seham

The girl's natural and immortal plaything is the doll. The doll should be large enough that the child can dress and undress it with ease.

IN THIS day, when early in life the child is exposed to emotional and nervous strain, next to sleep nothing will so effectively postpone and prevent fatigue as play.

Thousands and thousands of children today are robbed of their right to be healthy and to develop normally by being denied sufficient play and recreation. The child of poor parents is deprived of this privilege because his earning power, small as it may be, puts him to work in stores and factories when he should be playing outdoors. Inevitably, he develops the indoor habit so that when he does find a chance for recreation he is ignorant of how to use it advantageously; consequently he goes to movie houses and theaters. Sons and daughters of the well-to-do are, through their environment, so inured in artificiality that they, too, lose healthy, impulsive interest in instinctive play and recreation.

Children of Today Have Unstable Nerves

We have advanced into such a false attitude of seriousness toward life that it does one good to think back to the past when man worked solely so that he might live. Primitive man exerted himself only when his stomach needed food and his body needed warmth. He was here today, the morrow did not concern him. Work to him was a necessary evil to keep his body alive. Today our modern city life stings the senses and stimulates the yet dormant emotions of early childhood. The pushing through crowded streets, the dodging of automobiles, the disquietude and restlessness within the home are unfortunate and irritating influences on a growing brain and an undeveloped nervous system. Is it then any wonder that our children early exhibit signs of infection with the virus of continuous activity and of its by-product, emotional and nervous instability?

Parents Should Provide Serene Environment

Our children have lost the sense and spirit of relaxation. For this we must blame the parents, because they do not provide for them an environment of serenity, in which they can regain and strengthen mental poise and physical stamina, which the outside world incessantly tries to break down.

Recreation for the child does not mean the diversions the adult chooses for his amusements. The recreation of the child is play. The child hungers for motor activity and the natural expression of this need is play.

Play is so intrinsic and characteristic a need of young life that it has attracted the attention of many noted philosophers and writers, who advanced various explanations as to its nature. Schiller, the great German dramatist and poet, believed that play represented the surplus energy that the child must discharge in order

to develop properly. Spencer, the famous English philosopher, shared Schiller's views.

However, this explanation is not thought to be all inclusive. It is true that the child's great restlessness and his never ceasing desire for motor activity seem to indicate an unusual amount of vitality, of surplus energy. But if he played with the sole purpose of merely ridding himself of this surplus energy, then play would never be beyond his physical capacity, it would never exhaust him. Yet we all know that he does become exhausted, especially when playing in competitive games.

A more recent point of view considers the impulse toward play an inherent characteristic, which has its origin in the instincts of primitive man. Thus is explained to us why, even in the twentieth century, the boy still relishes the activities that made living possible in the dark ages, why he loves to fish, why he goes hunting and why he so eagerly picks a fight.

In the light of today's environment the explanation that welds together both these points of view and simultaneously enlarges their scope is most adequate. Play does furnish an outlet for the superabundance of energy that the child undoubtedly possesses. In his play he does somewhat imitate those activities that served as means of livelihood for primitive peoples.

In Play, Child Rehearses Adult Experiences

But play is more than that. Just as the puppy plays at those things the mother dog does, so the child plays at things men do. It has been well pointed out that in animal life practically the whole education is based on play; that the adult intelligence of any species is foreshadowed in the complexity of the play life of the young, and that the character of the play has a definite relation to the life activities of the adult. Thus play serves as a preparatory phase, in which the child rehearses the experiences that will be his in later life.

In speaking of play I have reference to activities that we carry on with no other purpose in mind than to get pleasure. It is not the amount of effort spent, but the motivation for an act that differentiates play from work. Indeed, one and the same task may, for the same person, be work today and play tomorrow. If a child, on his own volition, builds a cave, though it may tax his strength severely, he plays. If, on the other hand, he is told to cut a certain amount of wood, the effort, though probably not more strenuous than building a cave, is work to him. If a child chooses to do an act voluntarily, if he follows his own creative desire, while exerting himself, he is playing; but if he is made a slave to whatever he is doing and bound to perform it as a means to an end, he is working.

Play Is Serious Business to Child

Play assumes the same importance and seriousness in his life as study and work do in the life of the adult. It furthers his instinct of imitation, it develops his power of imagination and it furnishes him with new feelings, new knowledge, new desires and abilities. It exerts its wholesome influence on both the mind and the body. It strengthens the lungs, it lowers and steadies the pulse rate and gives greater endurance to the large and fundamental muscles. It creates better physical judgment, it improves the speech and stimulates the coordination between thought and speech.

During infancy the play life of the child is very simple, expressing itself in spontaneously kicking his legs, in

H. Armstrong Roberts

Placed next to a sandpile, the child immediately digs into it with his hands, then with a piece of wood, then he scoops it out with a shovel, until at last he builds from it things of diverse shapes.

movements of his arms, in wriggling his body, in lifting his head. Simultaneously with his first attempts at walking comes a greater complexity of his play instinct. No sooner have his eyes caught sight of an object than he tries to reach for it with his hands; he holds it; he drops it only to pick it up again. Placed next to a sand pile, he immediately digs into it with his hands, then with a piece of wood, then he scoops it out with a shovel, until at last he builds from it things of most diverse shapes. A little older, he begins to play with blocks and other objects that stimulate his creative mind and furnish him with an opportunity for combinations and constructions.

H. Armstrong Roberts

Blocks stimulate the child's creative mind and furnish him with an opportunity for combinations and constructions.

Once he is able to balance himself well on his legs, he enjoys running around; he runs from one place to another, aimlessly yet persistently. Soon he is no longer satisfied with merely handling a ball; he throws it at a definite goal. Thus knowledge and experience accumulated in what seemed aimless play are set to definite purpose in games of greater complexity. He handles the scissors, inefficiently at first, but soon in greater precision in cutting out pictures. Such occupations interchange with exercises in which he can strengthen his muscles; he rides the broom stick, he swings in the swing and he jumps off the spring board.

Social Impulse Develops at Puberty

During the age of from 6 to 12, the child enjoys plays and games that will promote the power of inhibition and the coordination between purpose and execution of movements. This is the time when his impulses for direct action, his desires for productive application of his motor powers burst forth. The spirit to emulate his elders and to compete with his playmates becomes a strong incentive for greater effort. Fighting, fishing and, wherever opportunity offers itself, hunting are his favorite pastimes.

From then on and throughout puberty, the child experiences and gives way to his social instinct. He delights in cooperation with other children and in group play, in which every child does his part for a common purpose and in which every child contributes to the success of the game. Thus he develops the most important of all human impulses, the social impulse, so that when the time is ripe for cooperation in serious matters and for heavy responsibilities he will be able to draw on his store of courage, self-reliance and self-confidence that he has accumulated through play.

During early infancy when the child is as yet unable to do things for himself there is a great temptation for the mother to provide for his entertainment by procuring toys for him that he cannot manipulate himself. This opens the way for two great dangers. First, the child acquires the habit of being an onlooker instead of a performer in play. Thus he looses independence of action, expecting instead that somebody else will provide entertainment for him.

The second danger is that the mother is nurturing in herself the habit of playing with the child. Since from her point of view she knows better how to play than the child, she soon foists her ideas of procedure on her inexperienced playmate. This leadership of hers unquestionably represses the child's spontaneity and hampers the development of his self-confidence. It is true, of course, that for the first few years of life the mother is the natural and ideal playmate of the child, provided her participation in the play is one only of partnership and not of directorship.

Child Needs Separate Playroom

All too often the home of today fails to set aside a large and airy room in which the child can indulge in his play, unmolested and unhampered by adults. Here, in his laboratory, the furniture should be chosen so as to allow the child to use the chair for a riding horse and the cot for a spring board. At his work table he will find a welcome outlet for his imagination by modeling clay and by drawing with chalk and crayons. For the child of school age a tool bench must be added to the equipment. Carpenter work gives him endless joy and offers

infinite possibilities for his education. He is workman and master in one in this miniature world of things, in which he creates and produces by his own efforts. Here, in his city of toys, he should find the proper stimulation for his imagination and a solid foundation for those characteristics that in later life will determine his personality.

Suitable toys are indeed to the growing child as important as is suitable food. Their selection, therefore, deserves serious and careful thought. Some parents seem to think that the value to the child of a toy is in direct proportion to the value it has to the storekeeper. It is not the price, nor the shape nor the color of a toy that holds the interest of a child, but rather its intrinsic potentialities for stimulating action. Should there be only little he can do with it, he will quickly tire of it. It costs many parents great disappointment and a good deal of money to learn this lesson.

When Charles was 3 years old, his parents bought him an expensive toy automobile, equipped with all accessories. In its beautiful blue finish it certainly was a delight to the eyes of the parents. But how does the child react to it? Naturally, he immediately toots the horn. Enjoying the sound, he toots it again. This rather annoys his parents and he is told to stop it. Next Charles wants to take a ride in it out in the street. But his parents, afraid that the children in the neighborhood might scratch the paint, object. In a word, the child's ideas of playing with the toy clash continuously with those of his parents. At last, when one day he is reprimanded again, this time for touching the paint with dirty hands, in a sudden fit of temper, he grabs a stone and throws it at the automobile. This is the last notice he takes of this beautiful toy.

Toys Should Stimulate Imagination

Many of the playthings bought for children are intended to amuse the child rather than to furnish him with an opportunity for developing his mental alertness, for trying out his imagination and for rehearsing his power of imitation. An example is the mechanical acrobat, which shows the same tricks whenever a spring is released. Its novelty wears out as soon as the child has learned how to manipulate it. How different from the meccano toy which to me seems to have ideal qualities for stimulating experimentations.

The girl's natural and probably immortal plaything is the doll. She dresses her, she nurses her, she puts her to sleep; she is her mother and her teacher. This is to her the best form of self-expression to be ripened in later life to more practical form. Dolls are often chosen because they look attractive. Because a child is diminutive in size, when compared to the adult, it does not necessarily follow that her playthings should be tiny and delicate when compared to the size of the child. To expect a 3 year old girl to dress and undress a doll 3 or 4 inches long is just as illogical and absurd as for a mechanic to pound a tack with a sledge hammer.

Books for children should be selected with understanding and judiciousness. Unfortunately present day literature is brimful of fantasy and unreality, which becloud the mind of the child instead of foreshadowing to him the truths of life. Such books honor the false heroism of fighting and killing, and excite his as yet unstable nervous system. Read shortly before bed time, such books most likely create night terrors, make the child toss to and fro in his sleep, from which he awakens with dread and fear in his heart. In choosing reading matter for children parents should select those books that in simple, intelligible and interesting language depict the highest morals of mankind.

Time Allotted to Play at Various Ages

Of the time for play and recreation there is also need to speak. The younger the child, the more play he must have. With growth and increasing endurance the amount may be safely reduced, but never, during any period of development, during any season of the year can a child afford to be without his daily ration of play and recreation. A child between the ages of 6 and 8 attending the primary grades of public school has, after school, three hours of free time. That time he should be allowed to spend in free play, unhampered, unmolested, uninterrupted by mother or nurse. He should spend it outdoors, where alone he can find full opportunity for spontaneous play. At 9 years of age the free time of the school child amounts to three hours and forty-five minutes, of which three hours and twenty minutes (80 per cent) should be devoted to play and half an hour to some responsible physical work, such as chores. At the age of 10, two hours and forty-five minutes are to be given to play, the remaining hour to be divided equally between physical and mental work, the latter to include studies such as home lessons or music. At 11, 12 and 13 years three hours are allotted to play, forty-five minutes for physical work and thirty minutes for mental work. Children in the eighth grade should be encouraged to play for two hours and forty-five minutes, which leaves them two hours and fifteen minutes for work.

The more one studies the child the more one is convinced that nothing will augment growth and improve health and efficiency so much as play that allows for free motor activity in the open. Fresh air and sunshine in themselves are sources of pleasure and health to the child. Nature with its note of wholesomeness, force and purity was meant for him. There is always something new, something thrilling in it.

The kitchen should be sanitary, convenient and pleasant.

Sanitation *in the* Kitchen

By Grace Marian Smith

Part I

IF THERE can be a comparative degree of sanitation, the kitchen is not the place for it. There everything should be not only immaculate, but germ free. A kitchen is a workshop in which to prepare the food and to wash dishes. It or the pantry adjoining must furnish storage space for staples, fresh foods and working equipment. That is enough to expect of one room, and the less other activities and articles are brought into it, the more likely is its major purpose to be served.

In planning a house, adjustments and compromises must be made, but all the advantages must not be given other rooms and the kitchen made to shift with whatever is left. This place of essential operations should have major consideration. "Feeding the family," says Dr. C. B. Thom, micrologist for the U. S. Department of Agriculture, "is our most important business."

When we consider that our health, spirits, judgment, disposition and consequently our happiness and success in life, all are affected by what we eat, and that we eat three times a day, three hundred and sixty-five days in the year, all the years of our life, we appreciate the importance of this room.

Needs Sunlight and Air

A workshop that is to be used so frequently and for such essential work should be sanitary, convenient and pleasant—sanitary for health (ours and the worker's) and for the satisfaction of our esthetic sense; convenient and pleasant, lest the worker be tempted to scamp her work and so neglect important safeguards.

The kitchen should receive full measure of sunlight and air, two of the best disinfectants known. If the worker finds the room more cheerful with blue and white checked gingham or pink lawn drapes, I should not be the one to deny them to her; but neither curtains nor shades should be allowed to shut out sun and air. The correct position for a shade in any room is rolled to the top, except when it is required to shut out heat and glare or to maintain privacy. Shade rollers attached to the lower sash will shut out the public, and light and air are admitted through the upper sash.

Light above Stove and Sink

Artificial lighting should provide a light directly above the stove and the sink; the central lighting fixture will usually serve the table.

The kitchen must be easy to clean and to keep clean. There must be protection against flies, roaches, moths, mice and other such marauders. Decent folk cannot tolerate anything so filthy and dangerous as flies. Full length, tight-fitting, fine-meshed screens for all windows and doors, put in place early and left until the last fly has gone, help insure against

them. No food should be left exposed. Garbage should be burned or otherwise disposed of frequently, and in the meantime should be kept in a covered pail.

Large, efficient traps placed three or four feet above the ground a few feet away from the door help.

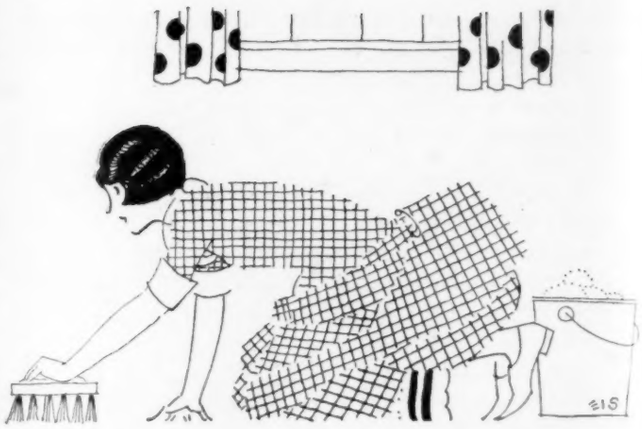
Roaches, weevils, ants and mice, which soil and destroy foods, ruin linens and equipment and even bore or gnaw their way through drawers, walls and doors, can best be guarded against by metal or metal-lined furniture. With sanitary surroundings, care and promptness in returning supplies and leftovers to their tin or tin-lined drawers or boxes and the employment of traps and powders, these troubles can be reduced to the minimum. If they cannot be entirely eliminated in such ways, the next step is to install new furnishings in place of the damaged ones that permit their entrance.

In these swiftly moving years, science daily makes revolutionary discoveries. A comparatively modern hospital ought to be the last word in sanitation. I asked to be allowed to visit the kitchens of the U. S. Government's Speedway hospital, near Maywood, Ill., with a capacity of 970 patients. I learned that they have three kitchens, one on each floor, which allows consideration of the varied diet requirements of people of different conditions and occupations.

Modern Hospital and Hotel Kitchens

The floor covering throughout the hospital is battleship linoleum, easy to keep clean, comfortable to stand on, and practically indestructible even with hard usage. The walls are of hard-finished plaster, painted with washable paint. All corners are round. Door and window jambs are set flush with the plaster. There are no casings. Transoms near the ceiling provide an outlet for odors and hot air. Sinks are zinc (not so good). Wellsville steel, smooth, polished and dark gray, covers table tops and other working surfaces and forms some of the cabinets. The iceless refrigerator is in three sections: one each for milk, fruits and vegetables, and meats. Mechanical dishwashers, hot suds, clear rinse and sterilizing cabinets insure clean dishes.

Battleship linoleum is easy to keep clean and comfortable to stand on.



The kitchen must be easy to clean and to keep clean.

On the theory that hotels, whose patronage depends on satisfactory service and economical operation, should avail themselves of the latest and best, I next visited the new Palmer House, Chicago, rebuilt this year. Its kitchen has years of tradition and high quality to live up to. Here all cabinets and working surfaces are of Monell metal, a copper-nickel composition, harder than Wellsville steel. There is no chance that, as it ages, it will chip, crack, warp or shrink, thus opening crevices through which ants, bugs, roaches, flies or mice might gain access. The walls are painted and the floors tiled; the latter is apt to be hard on the feet. Electric refrigerators are so dry and cold inside that foods may be stored for weeks without deteriorating.

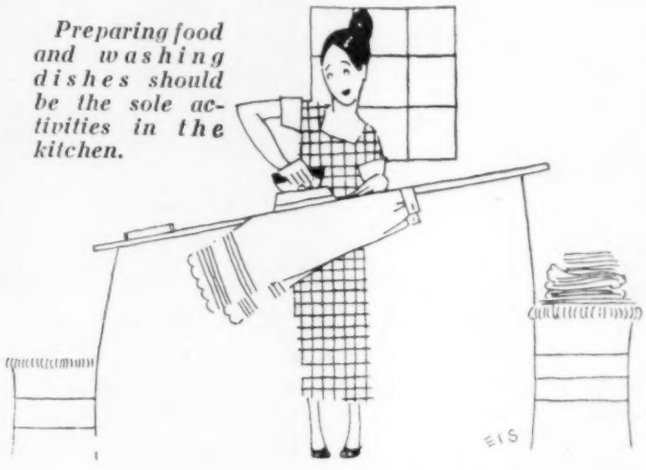
Choosing a Refrigerator

Care of food is a part of the necessary duties connected with the kitchen. Perishable foods require cold storage; in warm weather, refrigeration. The refrigerator is best placed in a small room adjoining the kitchen, because the fluctuating temperature and the probability of excessive heat in the room in which cooking is being done make it difficult to maintain a low, even temperature within the food compartment. An even temperature is quite as important as a cold one.

One should not choose a refrigerator because the finish matches the woodwork, or because the arrangement of the shelving and compartments is pleasing. Many boxes have been built to look like refrigerators, but their appearance is their only claim to the name. The requirements of

a good refrigerator are four: correct proportion between the capacity of the cooling device and the size of the food compartment; high grade construction as to cabinet work, hinges and latches; good insulation, and provision for free circulation of air.

A refrigerator in which moisture collects in the food chamber and extreme fluctuations in temperature favor the growth of molds and other bacteria not so easily recognizable but perhaps more harmful may be worse than no refrigeration. It gives a false sense of security while at the same time it provides the identical conditions we are seeking to guard against.



Preparing food and washing dishes should be the sole activities in the kitchen.

If a box is correctly built for the work it has to do, the manufacturer will probably call attention to the thickness and composition of the insulating medium and other points of merit. The housewife should inform herself before purchasing as to the comparative efficiency of the various materials used. For the outside of the box, from ¾ to 2½ inches of wood is undoubtedly better insulation than a thin sheet of metal, but only well-seasoned wood and very careful workmanship, which means higher cost, will insure against warping and shrinking as the box ages. In the all-metal box, the insulating interlining may be increased to insure correct insulation. Wood interiors have generally given place to porcelain, the latter being nonabsorbent and thus more sanitary and easier to keep clean.

The cooling unit may be ice or an electric unit. The latter has the advantage of being automatic and consequently of maintaining an even temperature between the limits set for safe food preservation. Above 50 F. bacterial life increases rapidly. With an automatic machine, one never runs out of ice over Sunday. Also, as one thankful housewife said, the electric machine never has muddy feet. Neither does the housewife have to wait for it to arrive before she can start on a shopping tour or a round of calls. When the temperature inside the box rises to a certain point, the machine automatically starts; when the temperature reaches the lowest point for which it is set, the machine stops, controlled by the same regulating device.

Electric refrigerators may be purchased complete, or the refrigerating unit may be installed in the box already possessed. Unless the old box is well-built, with tight joints and good insulation, the leakage of heat from the surrounding atmosphere into the inside of the box will require too constant operation of the machine, increasing the cost of current and needlessly wearing the machine and all its parts.

All the attention an electric refrigerator needs is regular defrosting of the cooling element, a precaution sometimes overlooked. In operation, moisture from the air in the cabinet is deposited as frost or ice on the cooling element. If too much is allowed to collect, it will prevent free circulation. Without circulation, moisture may collect in the food compartment and on the food, giving rise to unpleasant odors and perhaps spoilage. The preventive is to open the electric switch and allow the machine to stop running until the frost and ice have melted. The element will then again pick up the moisture until it has collected all it can care for, when it should again be defrosted. In the average home, defrosting should be done about once a week.

[Part II of this article will appear in the October issue.]

GREAT PAINTINGS of HOME LIFE

By Catherine Beach Ely

"Mother Feeding Child" by Mary Cassatt.

MOTHER and child life in the real home has appealed to great artists of every age and country. Their paintings call up delightful images of maternal love expressed in daily duties and pleasures, and may serve as an inspiration in these days when the home is being invaded by so many artificial distractions. The work of great artists awakens in us a visual realization of the spiritual values of home life.

A celebrated woman artist of modern times, Miss Mary Cassatt, who died at the age of 83 on June 15 of this year, devoted her career to portraying mother and child in the home, with a keen psychologic understanding of mother love in its serious and its playful moments, and with a delightful comprehension of the quaintness and humor of childhood. The Metropolitan Museum in New York City owns three of her pastels on the attractive theme of home care of the child.

"Mother and Child" by Mary Cassatt.

In her lovely pastel "Mother Feeding Child," the mother, seated at a table, holds a glass of milk to the lips of the child on her lap, who drinks eagerly, his face pressed against the rim of the glass. His mother aids the operation with a concentration on the central importance of baby's diet which is quite justifiable, for many a child is permanently handicapped by unwholesome feeding in early years. The mother wears figured green and white muslin, which harmonizes with the child's orange dress and contributes to the refreshing color scheme of the picture.

Trio of Pastels

"Mother Playing with Child" shows mother and little one entertaining each other and illustrates the fact that a healthy child finds delight in the simplest diversion. The dark haired mother in summer apparel sits on the grass beside her little one, a quiet smile on her wholesome, happy face. The blond, curly haired, two-year-old bends in baby-like absorption over the flowers in mother's hand.

The tenderness of maternity, the gaiety of well-cared-for babyhood are expressed in the pastel "Mother and Child." The young woman has just finished bathing her baby; the nude child sits on the edge of the bed, one arm trustingly thrown about her shoulders, while

"Mother Playing with Child" by Mary Cassatt.

she dries his feet. The colors carry out the impression of sunny hours—a green and rose screen, the mother's buff gown and a little gilt table set for breakfast.

This delightful trio of pastels by Mary Cassatt reveals the happiness that comes to the young mother in the intimate care of her baby, which the mother who turns over her child to hired service can never know. When mother and child share the daily experiences of childhood, its frolics and hygienic living, a close relationship is established for future years that can come in no other way.

Among the finest modern paintings of mother and child are those by the American artist Max Bohm, painted with inspired comprehension of the relation between the young mother and her little ones. In his painting "The Evening Meal," a mother in a humble home, with a baby on her arm, warms food over a hearth fire, while her two other children watch her eagerly. An inner light illumines her quiet face. The baby, lying in the curve of her capable arm, brandishes his little fists in contentment; baby's brother and sister stand as close as possible to the savory skillet, their sturdy little figures illumined by the dancing flames. The picture breathes the harmony of a clean, simple home, in which regular hours and natural pleasures put the stamp of serene health on the family.

Max Bohm (descended from a German scholar, a friend of Goethe and Schiller, who came to America to give his children a democratic education) was born in Cleveland, Ohio, and commenced in boyhood to earn his living by his art, as a designer in a lithograph house. After some years of preparation in France and America, he gained a brilliant reputation; his pictures were exhibited in the Paris salon and traveled about the world.

He has given us unforgettable portrayals of mother love, among which is his delightful "Sea Babies," posed for by his wife and children. A young mother in dark gown and hat sits on the shore, holding her tiny babe in her arms. Her two other children leave their games in the sand to admire the baby, the little boy with a mischievous twinkle in his eyes, the girl with adoring tenderness. The picture expresses a lovely sympathy between mother and children, lightened by humor and spontaneity.

In the painting "Fairy Tales," by James J. Shannon, the mother reads to two little girls in a charmingly decorated children's room. The picture is not only decorative, it is full of home feeling. The mother's back is turned to us, her soft brown hair knotted low on her head; we see the protecting curve of her graceful neck and shoulder as she bends toward her children. The two little girls, about 10 and 8 years old, listen with grave absorption to the fairy tales read by their mother. The older one has ash brown hair and a dainty profile, the younger has

"The Evening Meal" by Max Bohm.

a mane of red hair and bright blue eyes. Those of us who remember such an experience know how happy were the hours passed close to mother, listening to her sympathetic reading of marvelous tales. Can the radio bedtime story wholly replace this maternal intimacy? Will it have as deep an influence as mother's voice and personality?

"Fairy Tales" by James J. Shannon.

The children's room in Shannon's painting has been planned with understanding. The blue screen shows a pattern of birds, butterflies and flowers in a spontaneous rather than a conventional design. The children sit on a gay covered couch. White furniture adds to the cheerful effect. Modern psychology stresses the importance of an artistic room suitable for children in work and play hours. In the preparation of such a room, imagination, sense of color and sympathy with childhood are needed.

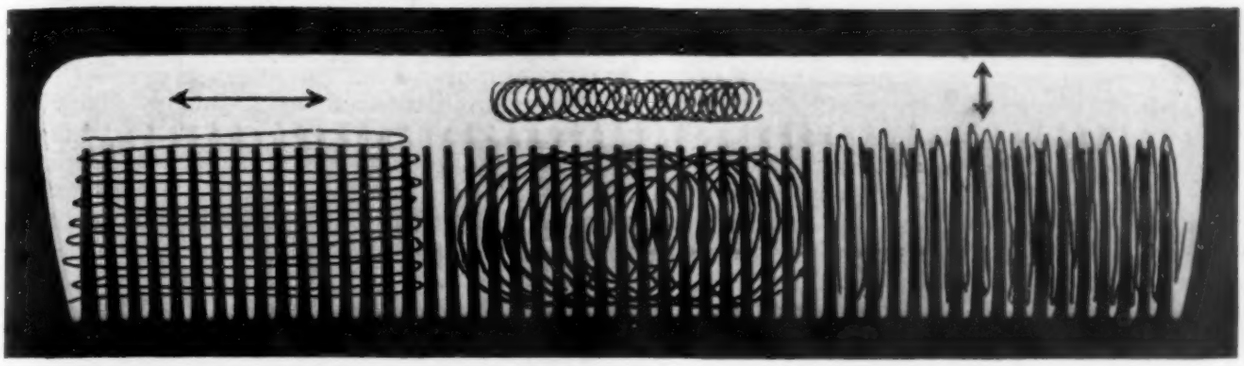
The delightful camaraderie in "Fairy Tales" between the reading mother and her children is portrayed by James J. Shannon, an Anglo-American artist. He was born in Auburn, N. Y., but went to Canada in his boyhood, and at 16 years of age settled in London permanently. After studying in the South Kensington Art School he established a studio in London. He received honors in Italy, France, England and America for his wholesome and pictorial work, which may be seen in leading art galleries. His fluent, expressive manner creates an agreeable mood and lends itself perfectly to the portrayal of refined and protected home life.

"The First Babe" by Jehan G. Vibert is an exquisite water-color, as French as can be. In spite of any impression to the contrary, the French are devoted parents and a charming relation between them and their children exists. In this painting the young parents in quaint attire feast their eyes on their baby, who sleeps soundly on a yellow sofa with pink cushions, his little arms thrown over the blue coverlet. Mother leans adoringly over her sleeping child, while her ball of worsted trails on the floor beside the baby's playthings. Father sits with folded hands gazing in tranquil beatitude at his offspring. This charming French interior has rose colored wallpaper, a big fireplace and an artistic leaded-glass window; it has real home atmosphere.

Vibert, the famous French aquarellist who painted this family scene, portrayed genre pictures with delicate feeling and a keen sense of humor. "The First Babe" has no trace of the satirical vein characteristic of some of his paintings. Its theme is parental tenderness portrayed with gentle humor.

Great paintings reveal the beauty of home care for the child so naturally and vividly that they argue persuasively for the home, not only as the most artistic environment, but as the best safeguard for boys and girls.

"The First Babe" by Jehan G. Vibert.



On the teeth of a comb are illustrated the three popular methods of brushing the teeth. All of these methods are at fault, because they do not reach the accumulations between the teeth.

Common Sense *in* Mouth Hygiene

By William M. Gardner

TEETH play a large part in the attractiveness and harmony of features. Long before the toothbrush was advocated as a health measure, people who were careful about their personal appearance used a toothbrush solely for cosmetic reasons. Brushing was limited to those surfaces of the teeth that were exposed to public view. No thought was given to mouth cleanliness and health. Prevalence of dental disease, to which, in turn, certain systemic diseases were attributed, soon showed the error of such a limited use of the toothbrush.

Most articles in current literature stress the importance of mouth hygiene by pointing out the unfavorable conditions that may arise both in the oral cavity and in the general system because of neglect. The authors spend little or no time on the different factors that aid in bringing about intelligent care of the mouth and the proper brushing of the teeth. They assume that thorough and efficient brushing is an easy thing, that only the willingness of the patient is necessary. The assumption is incorrect.

Why the Toothbrush Has Failed

A recent routine examination of 500 persons showed that 90 per cent had unhealthy gums, ranging from a mild inflammation of the gum tissue with only slight, occasional bleeding to a pyorrhea so marked that the removal of all teeth was advisable. The persons were above the average in intelligence, many professional men, nurses and school teachers being included in this group. About 98 per cent of them gave a history of having used a toothbrush at least once a day, usually in conjunction with a dentifrice and a mouth wash.

The obvious conclusion from these statistics is that the toothbrush has failed miserably in its rôle as the guardian of gum tissue. Careful inquiry into the mouth hygiene habits of these persons, however, led to an entirely different conclusion. It was found that:

1. Most toothbrushes on the market are ill shaped and too large for effective brushing.
2. Popular methods of brushing neither clean the teeth nor correctly stimulate the gum tissues.
3. The time spent in brushing is too short.
4. The value of tooth pastes, tooth powders and mouth washes is grossly overestimated.
5. Most persons have no accurate knowledge of the problem they are trying to solve.

Information in Ads Often Misleading

The inquiry also brought out the fact that the majority of patients knew the necessity of a clean mouth for good teeth and good health. They knew the wisdom of prevention yet could not work out for themselves an effective means of bringing it about. They lacked knowledge of the fundamentals of mouth hygiene and had learned what little they knew from advertisements of dentifrices and mouth washes. Dental advertisements naturally present the advantages of their products and are sometimes very misleading as far as the scientific truth is concerned.

The purpose of this and the succeeding article, then, is to correct some of the popular fallacies regarding mouth cleansing, to present as clearly as possible the problem of caring for the teeth, and to offer an efficient method of using the toothbrush as a solution of the problem.

Time is an important factor in cleaning teeth and in maintaining healthy gums. The minute

or two spent by the average person in hastily and thoughtlessly applying a brush and a dentifrice to the easily accessible surfaces of the teeth, in many cases without really a thought of cleaning them, is in a large measure responsible for the unhealthy condition of many mouths.

The careful housewife spends much time carefully washing thirty-two dishes one by one, much more time than she does in brushing thirty-two teeth. It would seem logical that a tooth is much harder to get at and to clean thoroughly than a dish and that its cleanliness is of much greater importance.

Time to be spent in brushing teeth varies with the individual. For the patient who has regular teeth and no gum infection, three to five minutes twice a day is sufficient. Brushing teeth is a tedious task, and time spent in brushing passes slowly. Every person should learn how long the minimum time of three minutes really is. Brushing should therefore be done by the clock until habit no longer makes it necessary.

Patients who have irregular teeth, many fillings, much bridgework or a systemic condition that would predispose them to decayed teeth or pyorrhea should spend more time. In cases in which pyorrhea already exists, brushing three times a day is advisable until a healthy condition is established; then brushing twice a day will usually maintain a healthy condition. It may be well to follow the intelligent guidance of the dentist who is treating the pyorrhea.

Method of Brushing

Brushing must accomplish two things: (1) it must really clean all the surfaces of the teeth, to prevent decay and formation of deposits, and (2) it must stimulate the gums to make them resistant to mechanical injury and bacterial invasion.

There are three popular methods of brushing, the back and forth (horizontal), the up and down (vertical) and the large circulatory (rotary) movements. All of them have one great fault in common—they deal with high spots both on the teeth and on the gum tissue. In order to bring out their fault more clearly and strikingly, the task of cleaning an ordinary comb with a toothbrush will be considered.

On the teeth of a comb, just as on the teeth in the mouth, accumulations always form between the teeth, especially at the point where the teeth in both cases meet the supporting structure. Application of a toothbrush to a comb will quickly show the absurdity of the back and forth and the large circulatory movements, both movements failing completely to disturb the deposits between the teeth. The up and down movement, as used by most patients in the mouth, is equally as inefficient. In cleaning the comb this method becomes efficient as soon as enough pressure is exerted to force the bristles between the teeth. The principle of pressure then is an important one. It is absolutely essential for cleaning between teeth and for stimulating gum tissue. It is the keynote to the correct method of brushing.

It is hard to teach a method of brushing by writing about it. Most persons lack the power of visualization and are entirely unfamiliar with the structures of the mouth. An attempt will nevertheless be made to describe as simply and as clearly as possible a method of brushing, the principles of which were first introduced by Dr. W. J. Charters of Des Moines, Iowa, a few years ago. It has been shown that the popular methods of brushing are wrong. A little concentration on the next paragraph will teach one the right method.

Pressure Must Be Exerted

The bristles of the brush are placed at right angles to the long axis of the teeth. The brush rests entirely on the teeth, not on the teeth and the gum tissue. Pressure is then gently but firmly applied so that the bristles will slide off of the prominent parts of the teeth and penetrate into the spaces between them. The sides of the bristles as they penetrate will come in contact with the gum tissue and compress it. A slight wiggling or vibratory movement is then started, care being taken to maintain enough pressure to keep the bristles in the spaces into which they have been forced. The extent of the movement is limited by the pressure applied and is dependent almost entirely on the flexibility of the bristles.

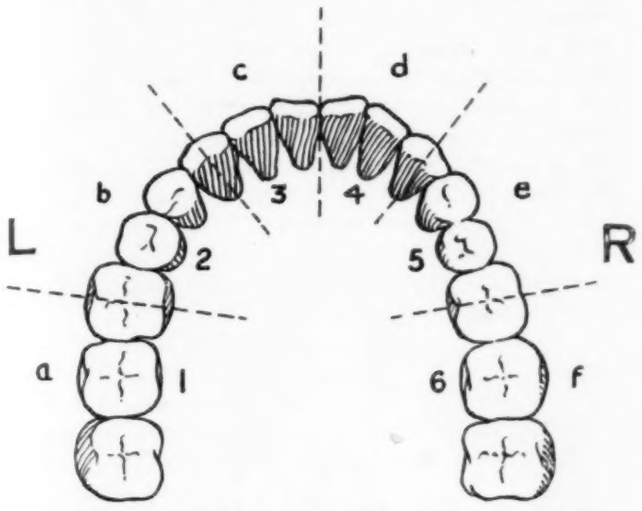
In this method of brushing, then, there are three definite steps to be remembered: (1) position of the brush; (2) application of pressure, and (3) the slight wiggling or vibratory movement. These steps must follow in the sequence named. They must be thought of every time the brush is moved to a new area. After a few weeks the habit will be established, and their application will be automatic.

A definite routine in brushing must be established so that none of the teeth will go unbrushed. For this reason it may be helpful to divide the mouth into sections or areas, as shown in the illustration on the next page. The areas marked off are small, because the small straight type of brush can take in only a few teeth at a time.

Patients invariably brush the outer aspects of their teeth first. This habit may be a remnant of the time when teeth were brushed for cosmetic reasons only. A more logical place to start brushing is on the inner surfaces of the lower teeth. The glands that form saliva empty into the mouth underneath the tongue. Deposits (tartar) are precipitated from newly secreted saliva.

The first surfaces that present themselves for deposits are the surfaces toward the tongue in the lower jaw. Deposits are almost invariably

the heaviest there. These surfaces are hard to brush correctly, especially when the teeth are irregular and the tongue is large and unruly. If the brush is applied to these surfaces while



Diagram, showing the key to a good system of brushing the teeth.

the bristles are still stiff, more efficient cleaning will result. Also, there is a tendency to hurry at the end of brushing, so that the inner surfaces, which need brushing most, get only a lick and a promise. A person is not nearly so apt to hurry on the outer surfaces of the front teeth, which are exposed to public view. They should be brushed last.

The surfaces of the teeth toward the tongue have the same rounded contours and therefore present the same cleaning problems as those toward the cheeks or lips. The same method of brushing is used. It will take patience and perseverance to learn to apply the brush correctly in areas 1, 2, 5 and 6. Care must be taken that the bristles will be at right angles to the tooth and that the penetration of the bristles can be felt.

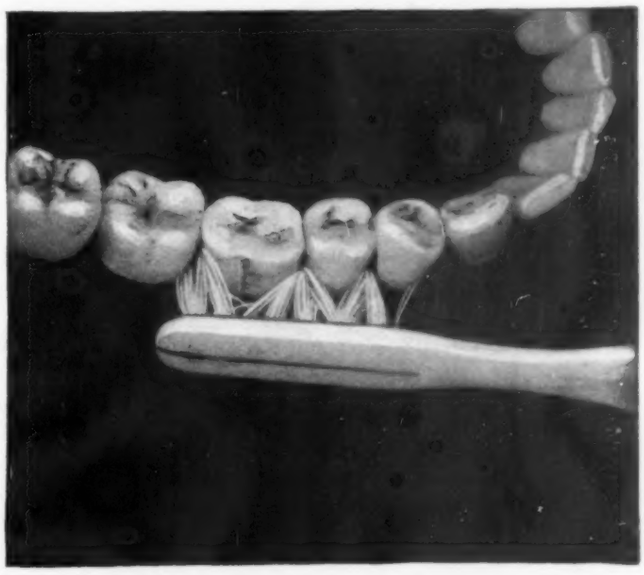
In brushing the lower left side (areas 1 and 2), it may be well to remember that the handle of the brush is on the right side; when brushing the lower right side (areas 5 and 6), the handle of the brush is on the left side. When brushing the lower front teeth (areas 3 and 4), the brush is used endwise, with the handle of the brush almost vertical. All the brushing in this region is done with the tip of the brush only. The short, stubborn end bristles well supported by the handle will penetrate instead of bending over.

When brushing the outer surfaces of the back teeth (areas *a* and *f*), the mouth should not be opened widely. The grinding surfaces should be only about one-quarter inch apart. This will relax all the muscles of mastication and will allow far greater freedom and ease in the movement of the brush. If the upper wisdom teeth are still inaccessible, the lower jaw should be moved toward the side being brushed. This will take the upper portion of the lower jaw out of the way.

The grinding surfaces are brushed by the same method. Pressure is necessary to get the bristles into the many little pits and grooves. The little wiggling, vibratory movement will clean efficiently.

This method of brushing brings about a physiologic stimulation of gum tissue. The blood exchange is brought about by pressure rather than by friction, as in other methods of brushing. In this way it simulates more closely the stimulation gum tissue gets from coarse foods. The sides of the bristles as they penetrate between the teeth cause a compression of the little elevations of gum tissue. A blanching of the tissue results not only where the pressure is applied, but also for a considerable distance from where the pressure is made. This blanching means that the blood has been driven out of the area. As soon as the brush is removed, there is a decided reddening or blushing of the tissue. Fresh blood from the arteries has entered the area. This new blood will neutralize the toxins in the area and will also be active in the repair of broken down tissue or in maintaining health.

If getting teeth clean were the only purpose of brushing, constant pressure and movement could be made in one area until the teeth were clean. If this were done, only one blood exchange would be brought about in the gum



By applying pressure, the bristles slide from the "high spots" and penetrate between the teeth. This is what should happen.

tissue. It is therefore much better to brush an area just a short time, then pass on to the next one. In this way the mouth should be gone over four or five times. Probably a better and more systematic way would be the following one: Brush the areas in pairs, brushing area 1 for a

few seconds, then area 2, alternating in this way until the teeth feel clean and until a definite tingling sensation is felt in the gum tissue. Then go on to areas 3 and 4, brushing them alternately.

If the person's method of brushing has been incorrect, the adoption of the correct method will usually cause the gum to bleed. If the bleeding continues for only a week or two there need be no cause for alarm. The many little tissue cells that cover the gums are much like the cells that line the palm of the hand. The hand that is unaccustomed to hard work will soon blister and become sore. If the hard work is continued, nature will cause the formation of many more cells to act as protection. The hand is then said to be calloused.

The protective cells covering the gums react in the same way. Correct and repeated brushing will call up a vigorous exchange of blood, and the mild irritation of the bristles will cause a multiplication of protective cells. If, however, the bleeding persists after the lapse of a week or two, a dentist should be seen as soon as possible.

It may be well for one to brush according to the rules laid down in this article with the article before one, so that he can refer to it as problems arise. It is impossible to remember it all in one reading. It may also be of some assistance to practice brushing before a mirror for a few days. The application of the brush before pressure is applied is so important and so exacting that the eye will be of great assistance in guiding and correcting the hand. It may take half an hour to brush the teeth correctly the first time, but in a short time one can learn to do it in the required period of from three to five minutes. Care of the mouth is a lifetime job. Time spent in learning the best method of taking care of it is time well spent.

In my practice of dentistry it has been forcibly impressed on me that prevention of dental diseases, especially diseases of the gums, depends not so much on visits to a dentist once or twice a year, as on the person's own intelligent daily efforts.

[*In his October article, Dr. Gardner will tell the kind of toothbrush to select and what to use in the way of dentifrices and mouth washes.*]

Misconceptions about "Insanity"

MISCONCEPTIONS that still linger about so-called insanity are enumerated in a recent issue of the *Mental Hygiene Bulletin.* Among them are the following:

1. That insanity comes suddenly. Insanity develops gradually over shorter or longer periods of time.

2. That once insane always insane. Many of the insane are restored to health after a period of hospital treatment.

3. That insanity is a disgrace. Insanity is a condition no more to be ashamed of than pneumonia or a broken limb.

4. That insanity is an unfortunate visitation to be regarded with resignation and fatalism. Insanity is a mental disease and should be given medical attention, just as tuberculosis, cancer or other physical conditions.

5. That mental disease is incurable. Many persons with mental disease are being cured today and restored to health and normality.

6. That asylums for the insane are dreadful places and that admission to them rings down the curtain on the lives of the victims. Our asylums are being turned into hospitals in which the insane receive medical care and treatment and from which between 25 and 40 per cent are discharged, recovered or improved.

7. That emotional shock, the loss of dear ones, disappointment in love, economic loss and other human misfortunes cause insanity. Personal misfortunes are frequently the precipitating causes of insanity, but the accumulation of a variety of factors inherent in the progressive life experience of the individual is really responsible for unsettling mental balance.

8. That insanity is a specific disease entity. Insanity is a convenient term used by the courts to denote irresponsibility in the eyes of the law, and there are many different kinds of mental disorder just as there are many kinds of physical disorder.

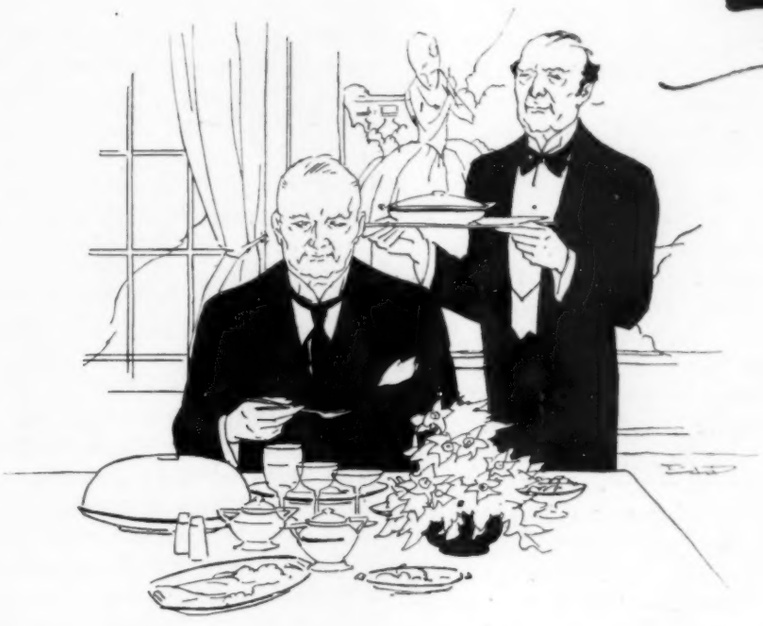
9. That nobody can guard against mental disease. There are usually danger signals and symptoms of approaching breakdown that can be recognized and medically dealt with.

10. That a person is either sane or insane. There are different degrees of mental health, just as there are varying degrees of physical health.

11. That "nervous breakdown" is a disease of the nerves. "Nervous breakdown" is in reality a mental condition in which there is seldom anything organically wrong with the nervous system.

EATING HAZARDS after Fifty

By CLARENCE W. LIEB



The platter and the cocktail shaker would make a better symbol of death than the skull and cross bones.

The platter kills more than the sword.

The cup that cheers one moment may be the cup of sorrow the next.

AN OLD proverb states that "at 50, a man is either a fool or a physician." The meaning that the sage who enunciated this thought wished to convey was that at the age of 50 a man should have learned his limitations. If he ignores them, he is a fool; if he tempers his life according to his shorn powers or idiosyncrasies, he has the judgment of a physician.

Most of us wish to live to a ripe old age, in possession of all our essential faculties and in good health. It is my deep conviction that most diseases that cause suffering after the meridian of life has passed are due to avoidable errors in diet.

Overeating Is Common

The most pernicious of dietetic misdemeanors after middle life is overeating. It is far better for the average person to eat sparingly of everything from hors-d'œuvres to nuts than to overload the stomach with a few things of which he is particularly fond. Food quantity after 50 is more important than food quality. After 50, oxidation is slower, activity less and digestive capacity reduced.

How arduously the majority of our most intelligent and valuable men and women of mature years worship at the shrine of Ceres! And what is the result? The Strasbourg goose has fat pork ramrodded down its throat and milk and meat funneled down the same red lane, for the purpose of pâté de foie gras production. Its liver is of inordinate size and fattiness; other organs show corresponding abnormalities. The goose is fed passively. The human goose chooses his own food and does his own ramrodding and guzzling. He becomes fat, lazy, decrepit in spirit, mind and body, and his last state is distressing to both himself and his family.

Overeating not only results in digestive discomfort and disease but in overweight, with all its dire consequences. Insurance statistics show that superfluous weight is inimical to health and the pursuit of longevity and that the fatter the man, the shorter his life expectancy. The person who is slightly underweight at 50 stands an infinitely better chance of reaching three score and ten than the obese person. Hence not only bodily comfort but bodily survival depend on normal tissue balance. Less nutriment should be taken as age advances and as activity diminishes. With every decade man's digestive capacity decreases and the selection of his food should be made with corresponding care.

Food Intake Must Balance Energy Expended

To preserve health after middle life it is necessary to see that the intake of food balances the expenditure of energy. Otherwise, the stored nutritive material becomes a liability. Overweight comes on insidiously, easily and pleasantly, but its removal is another thing.

The dangers of weight reduction are infinitely greater after the fifth decade of life than before.

The heart may be damaged by too strenuous exercise, the nervous system shattered by thyroid medication, the alimentary system disorganized by cathartic drugs and the general metabolism irreparably unbalanced by antiobesity methods. The devastating inroads made on the purse by reduction cures is no mean consideration, for health often varies in direct proportion to the size of that important "organ."

Food has killed and is killing more people than drink, using the latter term generically. That is a broad statement, but who can deny it? Gluttony leads to drink. Great drinkers usually have been great eaters.

If I were choosing an object symbolic of death, I should not choose the skull and cross bones. My choice would fall to either the cocktail shaker or the platter, and a toss of a coin would have to decide between these. The platter kills more than the sword. The cup that cheers one moment may be the cup of sorrow the next—and in the same token, the platter.

Fashions in Eating

There are fashions in eating as well as in playing, worshiping and loving, but the pendulum of fashion always swings too far. The diet with a large residuum is now rather generally advocated. The subject has not been viewed from the biologic and physiologic standpoint. The intestinal tract of civilized man is today shorter than that of the uncivilized man. This is due to the fact that for generations the former has been eating refined and cooked foods. Nature discovered that less digestive and absorptive surface was necessary on such a diet and to avoid redundancy in the alimentary tract it was gradually shortened. This is an evidence of anatomic economy. Doubtless there have resulted physiologic accommodations to civilized man's diet and possibly an increase in certain digestive juices and a decrease in others. Therefore a large proportion of our constipated bipeds and food faddists who are consuming inordinate amounts of cellulose are not only suffering from malnutrition and peristaltic fatigue, but are laying the foundation for a career of gastrointestinal invalidism. The irritant effect of cellulose on sensitive, congested or ulcerated mucous membrane has potentiality for tremendous harm.

Injury to the intestinal lining may be produced in two ways. First, if the concentration of the irritant poisons elaborated in the colon is great, they may, by chemical injury, so change the absorptive power of the cell as to permit the entrance of both toxins and bacteria into the system. The second way is that of mechanical injury to the cell membrane of the intestine by hard, dry feces or food high in coarse residue, thus permitting the absorption of bacteria or their toxic products. In this way it is possible for a mild degree of intestinal poisoning to produce major symptoms, since small amounts of poisons may be absorbed over a long period of time.

Many stomach derangements can be cured or avoided by living on a light diet that does not require much energy to digest or much digestive effort to assimilate. There are a great many stomach and intestinal invalids whose cure seems to be impossible because of economic reasons. They may have to frequent the cheaper eating houses, buy inferior food or employ inferior cooks. Any one of these may cause digestive trouble, prevent its cure or increase its severity. It should not be forgotten that poor food, if well cooked, may be less harmful than good food badly cooked.

Simpler Foods Are Best

The simpler foods, if properly chosen, make less demand on the purse and the stomach. Often all that a subnormal stomach requires is an affiliation with a brain that knows how to choose food intelligently, for many people who diet faithfully do not do it intelligently. They are misled by friends, books, advertisements and dietetic quacks without regard to the individualization of their stomach requirements. Dietetic insult is added to digestive injury.

The brain worker with his lessened amount of physical exercise and oxygen consumption requires a corresponding decrease in digestive exercise and food consumption. It is a common misconception to think that meat in its various forms is essential to maximal mental efficiency. It may be necessary for hard-working outdoor laborers in the temperate and frigid zones but not for industrious brain workers in any zone. Laborers in cold climates, whether indoors or out, thrive better on a meat-containing diet, but those of hot climates do better on a fruit and vegetable diet. The rickshaw and burden bearing Chinese subsist almost entirely on a vegetarian diet. I am not advocating a nonmeat diet, but I advocate an individualization of diet.

The gastro-intestinal normality of uncivilized man did not depend on his diet alone. Vigorous physical exercise and periods of enforced starvation had as much, if not more, to do with their extraordinary digestive and excretory capacity than the quality of the food they ate. Now we modernists are trying to accomplish in the space of weeks what Nature took centuries to achieve, and we are handicapped by superheated and superarid rooms, suboxidating clothing, overcarbohydrated diets, underexercised bodies and overworked minds. Can one but marvel at Nature's altruism and man's adaptability! Were it not for public health measures and for prophylactic and preventive methods that have been brought about through the unselfish, intensive efforts of men and women of science, man today would be a frail person and progress would be decades in arrears.

The rickshaw and burden bearing Chinese subsist almost entirely on a vegetarian diet. Laborers in cold climates thrive better on a meat-containing diet, and those of hot climates on a fruit and vegetable diet.

There can be no stereotyped diet for persons over 50, for even at that age what may be "one man's food may be another man's poison." To follow a diet taken from a medical book or advertising page may result disastrously. To follow a diet recommended by a friend or a diet prescribed by a physician for an uncle with the gout is the height of dietetic folly. There are general rules having to do with the technic of eating and food preparation that all can follow, but when it comes to food quality a person's physiologic requirements must be considered.

Man Should Look at Physiologic Assets

Every man of 50 should have 100 years as his life span objective. Objectives are accelerating to achievement in health, as well as in war or in business. The average person drifts along with no optimistic health thought for the morrow, convinced that next year he will find himself more feeble, wrinkled, bald or gray. Economically, he figures that by next January his financial assets will have increased 10 per cent over last year. But how about physiologic assets?

Tremendous energy is expended and is wasted in the digestion of an overlarge meal. Overeating puts a tremendous burden on the digestive machinery from the mechanistic standpoint. Peristaltic fatigue is a phrase that has been aptly applied to this condition. The digestive tract is nothing but a muscular tube of varying diameter lined with mucous membrane. Food must be propelled through its twenty-six feet by muscular energy. Therefore, considered from the standpoint of physical laws, it is just as easy to drain the stored up energy by digestive fatigue as by mental or bodily fatigue. These functions are by no means individual units. They are interdependent. The abuse of one produces a vicious circle and upsets the entire chain of physicochemical functions; if long continued, such abuse may result in organic change.

Strain on Digestive Organs

The amount of energy necessary to propel an overlarge meal or one with an excessive amount of residuum through the tortuous digestive labyrinth within man is tremendous. The organs of digestion can assimilate just so much starch, protein or fat, although they have a wonderful flexibility and possess a margin of safety. If too much protein has been eaten, partially digested meat fibers reach the colon and there act as excellent culture mediums for pathologic bacteria, with resulting intestinal toxemia and its enormous potentiality for harm. If too many sweets or starchy foods are eaten, the sugar tolerance of the body is exceeded and the person becomes a candidate for diabetes.

From the foregoing it can be seen that the food hazards that confront the average person who has passed the half century mark are many. Most of them can be avoided. It simply requires thoughtful attention to the needs of the aging human machine. Careful physical surveys at yearly or semiyearly intervals made by competent medical experts are prerequisite to a full appreciation of the dietetic limitations and requirements of a person.

Knighthood was little more than an idle gesture.

He Stoops to

It Must Have Been Great to Be a Knight in the Days of King Arthur

IN THE old days the study of disease and the determination of the cause of epidemics were romantic adventures. It was believed that epidemics were due to earthquakes, comets' tails brushing the earth, sun spots, droughts, floods and countless other unusual manifestations of nature.

The night air, miasmas arising from swamps, sewer gas, stagnant water, pestilential humors, excessive vegetation, the proximity to graveyards and other such impossible and intangible things were discussed in all seriousness as the cause of disease. The Will of God and the Hand of Providence were particularly stressed.

Has Lost Its Romance

But romance in the study of disease has fallen into evil days. The most prosaic of sciences, bacteriology, has supplanted astrology in the diagnostication and prognostication of ailments. We no longer look to the stars, or consult the shrine or the oracle; instead, we take cultures of blood, the excrement, the drinking water, the milk or whatever seems significant, and then when we get results they mean something.

Highly esthetic persons would turn up their pretty noses at some of the things that physicians do these days. They would much prefer to discuss Keats, or enthuse over last night's performance at the opera. But the beautiful white tile bathroom exists only on condition that some one is willing to become interested in the disgusting thing called sewage.

Take hookworm disease as an example. For years we looked upon the poor white trash of the South as being totally depraved and worthless. But Dr. Charles Wardell Stiles studied the excrement—think of it, the excrement—of these poor folks for years, and found at last the cause of the trouble. They were sick; they had in their intestines a great number of tiny worms, which were sucking their blood and poisoning them.

Dr. Stiles traced the eggs of the worm as they were found in the excrement until they hatched in the warm soil and found their way into another victim. A beautiful piece of work! A work of incalculable benefit to the human race! Hookworm disease today is being cleaned up because trained and educated men are willing to examine the excrement of these poor people, and find out if they are infested with the parasite. Pleasant work? No, indeed, but very necessary.

Modern Crusade to Restore Holy Health

Typhus fever has been called vagabonds' disease, jail fever and famine fever, because it was found mostly in the lower strata of society. Nice people were loath to have anything to do with it, but Ricketts and Prowasek discovered the germ. Incidentally both of these men lost their lives as a result of the disease they were investigating—real martyrs. They found that the germ is carried by the common body louse (gray back, or cootie) from the sick to the well.

Conquer

By Thurman B. Rice

But the Modern Knight Has More Courage, Fewer Trappings and a Higher Goal

The modern knight seeks not the Grail, but a holier thing, the truth.

When typhus was destroying Serbia during the late war a great expedition was organized at an expense of millions of dollars to go into Serbia. What for? To kill lice! They killed the lice, and the typhus stopped short. The crusades of old were undertaken to kill infidels and restore the Holy Land; this modern crusade set out to kill lice and restore holy health.

The Black Death swept over Europe and took off half or more of the population. Prayers and supplications without number were sent up, but the epidemic continued; every sort of supernatural explanation was given, but no one was wise enough to look for the little, the lowly thing.

Prayers in Language of Bacteriologist

In these latter days, however, scientists have found that this is a disease transmitted from sick rats to human beings by the bite of a flea, and now it is rather easy to control the infection in regions where men and women have brains enough and humility enough to stoop to conquer. Today the prayers for the relief of plague are couched in the language of the bacteriologist, and express the firm and reverend conviction that God working through His laws will help those who help themselves.

Yellow fever, the terror of the South, was thought to be due to some mysterious miasma found in night air. Reed, Carrell, Agramonte and Lazear thought it was due to a far less romantic cause, the bite of a mosquito. These men and some soldier volunteers arranged to contaminate themselves with every sort of filth coming from the dead and dying yellow fever patients. They slept in the pajamas of men but a few hours dead; they lay on sheets and bedding soiled with the blood and excrement of dying men. It was a loathsome thing to do, but they did it for the love of mankind. No disease resulted.

They then deliberately allowed themselves to be bitten by mosquitoes that were known to have fed on the bodies of men suffering from yellow fever. Some of them took the disease and suffered terribly. Two of them died martyrs. They died that others might live.

Recently a medical missionary deliberately swallowed thirty disgusting wormlike parasites taken from human excrement, liver flukes, in order that he might take the disease, for which there is no very effective remedy, and so be able to come to the laboratories of the United States for study. The great John Hunter, often maligned and denounced as a wicked man, deliberately inoculated himself with venereal disease in order to determine, if possible, whether syphilis and gonorrhea were separate diseases or merely different types of the same disease.

Malaria Was Conquered

Ross went into the most dangerous part of India to study the relation of malaria to mosquitoes. He contracted malaria and became very ill, but persisted in great discomfort and

grave danger. Finally he found the mosquito that he was seeking. It proved the important point that mosquitoes carry the germ of malaria.

It is on the solid foundation laid on the lives of these and other heroic men who were willing to stoop to conquer that the great science of medicine has been built.

Two decades ago babies died of dysentery because the "grim Reaper plucked the tender flowers with the bearded grain." Now we recognize the fact that children die of dysentery because they become infected with the germ of the disease as it is transmitted by filth and flies, dirty hands and food. Since we have learned to look to the privy and the manure pile instead of to high Heaven for the source of disease we have been infinitely more successful in saving the lives of our babies.

So some one must do the dirty work; some one must not be afraid of dirty hands, noxious smells and disgusting sights; some one must bend intently and closely over tuberculous sputum, typhoid excrement and vile pus; some one must spend his life studying sewage in order that he may learn how best to dispose of it; some one must work out the life history of flies as the eggs and larvae are found in putrid fly-blown meat and decaying filth. In the performance of these lowly tasks these men have served their fellow men infinitely better than have most of the proudest names of history.

We used to look up to find the cause of disease; now we look everywhere—in, under and through. Everything high and particularly low is subjected to the closest scrutiny.

Our Coats Off to the Future

Away with the times when it was a religious duty to eat dirt and die in sweet resignation! The symbol of goodliness and godliness is no longer the clasped hands, passive and more than likely dirty; it is the clenched fist, with soap, scrub-brush and club conveniently at hand. Our hats off to the past; our coats off to the future! Shirt sleeves have supplanted the funereal frock coat and have come into their own.

When knighthood was in flower, the gallant hero rode forth in splendor to protect the weak and needy. In flashing armor, his coat of arms emblazoned on his shining shield, erect and proud, he made a striking picture on his prancing steed. With his trusty lance and sword, he would kill the wild boar and would save defenseless maidens—the pretty ones, at least—from the lawless robbers infesting the land.

He wore a lock of his fair lady's hair next his heart, forsooth. He risked his life for her smile or her glove. Egad! He would find the Holy Grail, or rescue brave Richard, or put the heathen infidel to the knife. Zounds! 'Od's blood! Hot dog! It must have been great to have been a knight in those days. But aside from the big kick he got from the experience, it was mostly an idle gesture.

The modern knight is a prosy figure, indeed; grubbing his life away over cultures and test tubes; digging, digging, digging deeper and deeper into the laws of Nature, as they are found in filth, dirt and diseased tissues; daily putting his faith under the microscope; stooping to the consideration of such ignoble and unmentionable things as lice, bed bugs, flies, fleas and maggots. But he gets results.

Modern Knight Seeks Truth

He seeks not the Grail, but a holier thing, the truth. He is unafraid whenever or wherever he finds it. He rescues not a few persons from imaginary dangers but millions from very real dangers, though he may be only a little gray man with spectacles and a stoop. He worships God by dedicating his life to the study of His laws to the end that he may serve His children.

Out of the filth of his culture tubes there arises a thing of transcendent splendor. Not dirt, or disgust, or derision, or disease, or danger of death itself has dissuaded his heroic soul from the pursuit of his vision, the conquest of disease.

The world is a far cleaner, a more beautiful, a happier, a safer, and a better world because men like this have stooped that they might conquer.

From Annals of the Barber-Surgeons, London, 1890.

II. Discipline Through Rewards

Training the Child to Obey

By
Smiley Blanton
and
Margaret Gray Blanton

PARENTS often ask: "Shall I reward my child for doing necessary things, such as dressing in the morning or eating the food that is put in front of him? Shall the child be paid for doing necessary chores about the house, such as hanging up his clothes or picking up his toys?" Some maintain that the child should do these chores around the home for the love and care that the parents give him. In a sense this is true, but this love and care must be made concrete to the child through definite acts of punishment and reward.

Other Rewards Besides Money

It is sound psychology to reward the child for doing things by letting him do some pleasurable act. It is quite all right to reward him with candy, toys or money for doing certain chores, especially unpleasant ones, such as taking out the ashes or helping with the dishes. It is quite unwise, however, to get into the practice of paying him for everything he does. This must not be carried to the point at which the child feels that he must be paid in money or given some pleasurable excitement for everything he does. He must be taught to work for things because he receives the approval of his parents and his companions. A pat, a kiss, a smile, a complimentary word—these, as well as gifts, should be used for rewarding the child for desirable conduct.

There are many types of rewards. Perhaps the most important are: (1) the absence of punishment, which is an equivalent to a reward; (2) a gift to the child, such as candy, toys, or money; (3) permission for the child to do something that is pleasurable to him, such as skating, sailing or swimming, and (4) the approval of the social group, especially of his parents and his playmates.

It may seem unusual to say that lack of punishment is a reward, but a study of children's behavior shows that this is true. Betty, aged 4, was in the habit of gaining her mother's attention by standing on the edge of her chair, screaming and pinching at her mother's arm. The mother often threatened to whip Betty or to put her to bed or to lock her in a room, but she never did. Betty was never punished for the temper tantrum, but at the same time she gained a certain amount of attention from her mother. The types of rewards listed are overlapping, and no one case illustrates only one type. But in this case just mentioned, it is certainly plain that the absence of punishment was in a sense a certain reward.

Escaped Punishment as a Reward

A small boy had the habit of walking around the coping of a school building. This had been strictly forbidden by the janitor. Nevertheless this boy was able, by planning carefully, to walk around the building from time to time without being seen by the janitor.

One day as the boy was passing a window on the coping, he was heard to say to another boy, "Come on, John; walk around with me."

John replied, "I'm afraid of the janitor."

The first boy replied, "Aw, no! I've done it lots of times, and he never caught me. It's fun!"

The very fact that the act was forbidden lent a certain charm to it, and that he could do a forbidden act and not be punished was in itself a certain reward.

In paying the child for doing certain things, great care must be exercised that he does not become too selfish or assume that he can demand payment for everything he does. A few selected things should be chosen for which the child is paid in money or in gifts. Anything that the child must do for his own health or for the rights of others should not be paid for. He should be made to do these things regardless of paying.

A child should be paid for only those things that are not absolutely essential. Then it should be a contract between the child and parent. If the child decides to break his contract, he should be allowed to do so. Let us say that the child is paid 10 cents a week for bringing his father's slippers. If the child decides he does not want to bring the slippers any more, the father should say, "That is quite all right. If you don't want to bring the slippers, then you don't get your pay." There should be no resentment in the father's tone or manner. Whenever the child is paid in money to do a thing, it should be a clear-cut business proposition, and he should be allowed to break the contract without being made to feel that he has committed a wrong.

To Pick Up All Toys May Be Too Much

One of the best ways of persuading the child to do the things he ought to do is to pay him for right doing by allowing him certain privileges. There are certain things, however, that must be kept in mind. The job that you ask the child to do in order to win the privilege must not be too hard. Allowance must be made for the child's mental and physical capacity.

It is not wise to ask a child of 3 or 4 to pick up all the toys in the room because that may be too much for him. If he picks up a few of them, it may be sufficient. One must be sure, however, that the privilege that is allowed the child is something that he really wants. Sometimes the parents assume that the child ought to want things when in reality he does not want them, and so these privileges offered as a reward are no incentive to him at all.

The approval of the social group, especially the approval of the child's playmates, is the most important means we have of rewarding the child. It has been found that the child, at least of kindergarten age, desires more than anything else to receive attention, and some children seem to appreciate attention even in the form of disapproval as much as in the form of approval. To give a kindergarten child a great deal of attention by scolding him because he will not eat his vegetables gives him almost as much pleasure as does praise.

Most parents are familiar with the method of using a chart on which are printed in large letters the various duties that the child is expected to perform, such as eating the food that is placed in front of him, going to bed when he is told, and picking up his toys. He is given a star for each one of these duties carried out satisfactorily for the day. Sometimes parents wait until the end of the week to give the child a star. This is too distant a reward for a child of from 3 to 6. When the child has earned it, he must get his star each day. It is sometimes well to give a very large and different colored star at the end of the week as a reward for getting daily stars.

A working mother had to leave her two children, aged 3 and 5, with the nurse. The nurse was an intelligent, kindly woman, but she found it difficult to get the same discipline from the children that the mother got, especially as regards the eating. The mother arranged with the nurse to give the children stars for each day that they ate their food promptly and without objection. The mother allowed the nurse to decide whether the children had earned these stars, and then the children pasted the stars on the charts with quite a ceremony.

This not only trained them to eat their food properly, but at the same time completely changed their attitude toward the nurse. Instead of regarding her as an unfriendly substitute for the mother, they treated her with much more respect and consideration, and she was able to manage the children in many other ways much better than she did before.

In using the chart it is frequently necessary to change the items on the chart in order to keep the child's interest alive. It is often necessary to change the rewards from a star to some small, bright-colored picture.

Must Not Reward Child for Stopping Mischief

The not uncommon custom of rewarding the child to stop him from misbehaving is quite destructive to all discipline. "If you don't cry, when mother goes down town, she will bring you some candy." "If you will stop crying, mother will buy you some ice cream." This merely trains the child to cry for what he wants. Under no circumstances should parents try to buy off a child when he is misbehaving. Instead of paying a disobedient child to stop crying, it is much sounder to follow out the old custom of giving him something to cry for.

The whole effort in training the child should be to teach him to work for his own approval and for the pleasure of working. Self-approval and the pleasure of working are the greatest rewards that any one can have. But the young child is too immature and too undeveloped to appreciate such a distant reward. This must be an ideal toward which one works slowly and which is reached only after many years of wise training.

[*The third article, "Discipline Through Punishment," will appear in the October issue.*]

Uncle Sam Calls a Halt on Fat-Cure Fakery

Swindling the Stylish Stout

By ARTHUR J. CRAMP

ALL widely advertised remedies for the cure of obesity can be grouped into two classes: those that contain desiccated thyroid and may reduce but are highly dangerous, and those that do not contain desiccated thyroid and will not reduce. It can be laid down as an axiom that there is no substance that, when put into the bath water or when rubbed on the surface of the body, will reduce weight.

All reducing bath salts and reducing pastes for external application are swindles, without exception. Yet, for some years past, the obese public has been led to believe by advertisements in newspapers and magazines that it can reduce by putting certain secret mixtures in the bath water, or by rubbing certain substances on the surface of the body. Finally, Uncle Sam has come to the protection of the optimistic overweights who seek short cuts to slimness and has declared some of the most widely advertised nostrums of this class frauds and debarred them from the United States mails.

La-Mar Reducing Soap

"Wash Away Pounds of Fat, Double Chins and Years of Age with La-Mar Reducing Soap. It Shrinks the Skin as it Dissolves the Fat." Who that reads advertisements in such publications as *True Story Magazine, Fawcett's Magazine, Photoplay Magazine* and innumerable newspapers but has seen this or similar advertisements urging the fat to purchase La-Mar Reducing Soap if they would become thin without the necessity of exercising or dieting? Say some of the advertisements:

"Nothing internal to take. No dieting or exercises. You simply wash your fat away without changing your regular routine. It acts like magic in reducing double chin, abdomen, ungainly ankles, fat wrists, arms, shoulders, large breasts or superfluous flesh on any part of the body."

La-Mar Reducing Soap was sold by H. J. Brown and his wife of Cleveland, Ohio, under the trade name La-Mar Laboratories. Brown used to exploit a cure for the liquor habit, which was sold under the claim that it could be given secretly. This worthless cure consisted of about three cents' worth of that dangerous poison tartar emetic, sold without any warning under a fancy name for $1. Later Brown sold an alleged cure for the tobacco habit, which was equally valueless. Then he went into the fat-cure business under the name of La-Mar Laboratories. There were, of course, no laboratories. La-Mar Reducing Soap was simply soap containing a little iodide of potassium and sassafras.

When the government investigated this piece of quackery, it was found that Brown was spending $120,000 annually for advertising purposes. He took in between $125,000 and $150,000 annually. Thus it appears that the newspapers and magazines that make it possible for men like Brown to swindle the public make more money out of the swindling business than do the swindlers themselves.

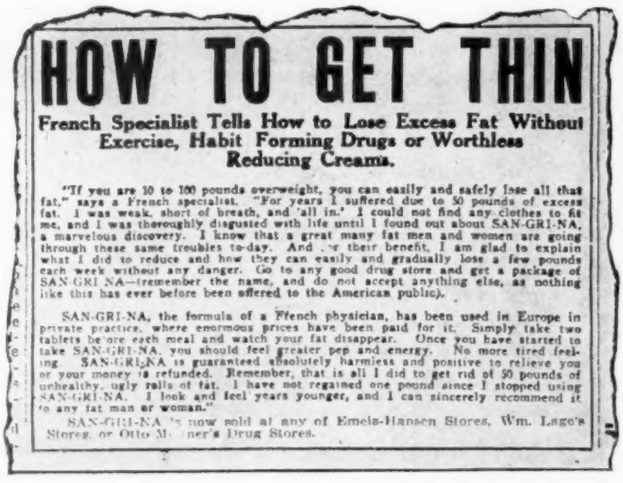
After a thorough investigation of La-Mar Reducing Soap, the federal authorities declared that the business was a fraud and, June 7, 1926, debarred it from the United States mails.

great humorist coupled together the words Miss Campbell, Katherine
Wash Away Pounds of Fat
Double Chins and
Years of Age with
La-Mar Reducing Soap
Shrinks the Skin as it Dissolves the Fat
The new discovery, La-Mar reducing soap, brings quick and amazing results. No dieting, no exercising, nothing to take internally. Reduce any part of the body at will without affecting any other part. La-Mar acts like magic on double chin, big abdomen, ugly, shapeless ankles, wrists and arms, large hips or breasts, or on superfluous fat on any part of the body or all over it. It is easy and pleasant to use and absolutely harmless—cleansing, cooling, soothing and effective. La-Mar Reducing Soap is sent direct to you by mail, postpaid, in plain wrapper, on a money-back guarantee. Price 50c a cake or three cakes for $1.00; one to three cakes usually accomplish its purpose. Send cash or money-order today. You'll be surprised at results.
REDUCE!
LA-MAR LABORATORIES
500-L Perry-Payne Building Cleveland, Ohio
TO ADVERTISEMENTS PLEASE MENTION FAWCETT'S MAGAZINE

H. J. Brown, under the trade name La-Mar Laboratories, appealed to the fat in this way.

San-Gri-Na

"Girls! Throw Away Your Fat! Look Your Best This Summer!" This was a typical advertising appeal for San-Gri-Na, put out by the



HOW TO GET THIN

French Specialist Tells How to Lose Excess Fat Without Exercise, Habit Forming Drugs or Worthless Reducing Creams.

"If you are 10 to 100 pounds overweight, you can easily and safely lose all that fat," says a French specialist. "For years I suffered due to 50 pounds of excess fat. I was weak, short of breath, and 'all in.' I could not find any clothes to fit me, and I was thoroughly disgusted with life until I found out about SAN-GRI-NA, a marvelous discovery. I know that a great many fat men and women are going through these same troubles to-day. And for their benefit, I am glad to explain what I did to reduce and how they can easily and gradually lose a few pounds each week without any danger. Go to any good drug store and get a package of SAN-GRI-NA—remember the name, and do not accept anything else, as nothing like this has ever before been offered to the American public).

SAN-GRI-NA, the formula of a French physician, has been used in Europe in private practice, where enormous prices have been paid for it. Simply take two tablets before each meal and watch your fat disappear. Once you have started to take SAN-GRI-NA, you should feel greater pep and energy. No more tired feeling. SAN-GRI-NA is guaranteed absolutely harmless and positive to relieve you or your money is refunded. Remember, that is all I did to get rid of 50 pounds of unhealthy, ugly rolls of fat. I have not regained one pound since I stopped using SAN-GRI-NA. I look and feel years younger, and I can sincerely recommend it to any fat man or woman."

SAN-GRI-NA is now sold at any of Emels-Hansen Stores, Wm. Lage's Stores, or Otto M[illegible]ner's Drug Stores.

Here, reduced in size, is a typical San-Gri-Na advertisement with the falsehood about the French formula.

imposingly named Scientific Research Laboratories and panegyrized by "Madame Elaine" of Paris, thus:

"My heart just seemed to beat with joy at the prospect of getting into one of the chic ready-made dresses at a store, size 36, which I now wear instead of a 46, which was too tight."

What a lure to those who would attain slimness by the shortcut route! The only thing necessary was the purchase of San-Gri-Na, which was said to be a "new French discovery." Investigation by the federal authorities disclosed the fact that the Scientific Research Laboratories were not laboratories, that "Madame Elaine" did not exist, and that San-Gri-Na was not a French discovery either new or old. The Scientific Research Laboratories was merely one of several trade names used by one W. E. Learned.

San-Gri-Na was analyzed in the chemical laboratory of the American Medical Association in 1924, and a brief editorial note on this humbug appeared in HYGEIA in May, 1925. The composition of the stuff varied. At the time of the American Medical Association's analysis, it was found to be essentially a mixture of sulphur and cream of tartar, with a small amount of laxative. When the government chemists analyzed it a year or so later they found, in addition to the substances found by the Association's chemists, pokeroot and desiccated thyroid.

"The evidence shows," reads the government's case against this fraud, "that the representations to the effect that San-Gri-Na is a new French discovery is false and fraudulent. The evidence shows that the ingredients in the San-Gri-Na preparation have long been known to the medical profession, and that there is nothing new in this combination. The evidence shows that the 'Madame Elaine' referred to in the advertisement is an employee of the promoters of this scheme, her true name being Helen Masten."

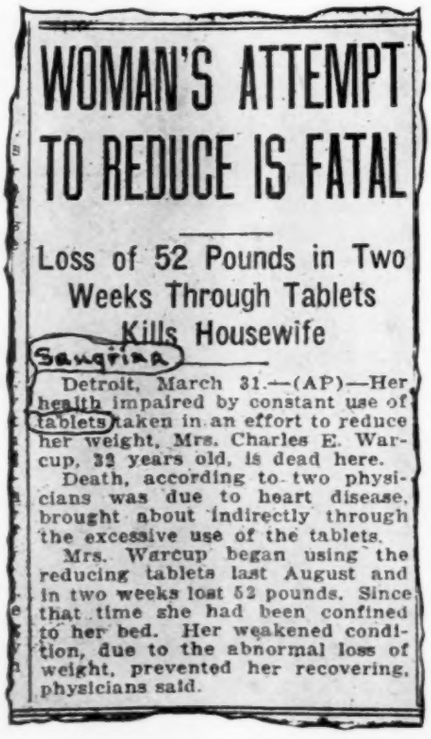
The government pronounced the San-Gri-Na exploitation a swindle and, June 24, 1926, debarred it from the United States mails.

Silph Reducing Gum

The government officials found also that W. E. Learned was exploiting other obesity cures. One of these was called "Silph Reducing Gum," widely advertised under the slogan, "Chew Silph and be Sylph-like." The Silph Reducing Gum had essentially the same composition as San-Gri-Na, the medicaments being incorporated with chicle and sugar to make a chewing gum. This was in spite of the fact that it was advertised as containing no thyroid or dangerous drugs although it contained both. It was brought out in the government's investigation that, while San-Gri-Na was sold from one address and Silph Reducing Gum from another, they both came from the same office, the building being a corner structure with entrances on two streets.

In the exploitation of Silph Chewing Gum, Learned created another fictitious person, one "Madame Claire," to whom prospective purchasers were urged to write.

Silph was declared a fraud.



WOMAN'S ATTEMPT TO REDUCE IS FATAL

Loss of 52 Pounds in Two Weeks Through Tablets Kills Housewife

Sangrina

Detroit, March 31.—(AP)—Her health impaired by constant use of tablets taken in an effort to reduce her weight, Mrs. Charles E. Warcup, 32 years old, is dead here.

Death, according to two physicians was due to heart disease, brought about indirectly through the excessive use of the tablets.

Mrs. Warcup began using the reducing tablets last August and in two weeks lost 52 pounds. Since that time she had been confined to her bed. Her weakened condition, due to the abnormal loss of weight, prevented her recovering, physicians said.

At least one woman lost her life through the use of San-Gri-Na, as this news item shows, although no mention is made in the article of the particular fraud that caused the death.

Dr. Folt's Reducing Soap

Overlooking no opportunity of defrauding the obese, W. E. Learned, in addition to selling San-Gri-Na and Silph Reducing Gum, also put out Dr. Folt's Reducing Soap. The advertisements of this product ran:

"Why should you turn to diets, exercises or drugs, now that a positive and absolutely harmless external way to melt excess fat from any part of the body is offered you? To quickly get ideal, slender lines, all you need to do is to wash every night from 5 to 10 minutes the parts you wish to reduce with a good lather of Dr. Folt's Soap."

The federal chemists reported that Dr. Folt's Reducing Soap was an artificially colored soap, made, as are all soaps, from fat and containing

PHOTOPLA

Girls! How Does Your Figure Compare with These?

TOO FAT *Here is a new way to reduce!*

SILPH CHEWING GUM!

"Did you hear about the latest discovery to reduce?" one fat woman is whispering it to the other—"It is called 'Silph' and is making a hit because it does take off FAT in the easiest and most agreeable way. What is there to do?—Simply chew two or three pieces of a refreshing and pleasant gum—it is as good as eating candies."

Through a most marvelous recent discovery scientists have been able to incorporate the extract of sea plants and herbs known for years as wonderful reducers into a delicious, refreshing chewing

Part of a Silph Chewing Gum advertisement.

minute amounts of iodides. Said the government report:

"The evidence shows that this soap is worthless for reducing arms, legs, hips, double chin and other parts of the body when applied as directed. It is, of course, manifest that one could not dissolve fat in the body with a fat product applied externally. I find from the evidence that the representations under which this soap is sold through the mails are false and fraudulent."

Dr. Folt's Soap was barred from the mails at the same time that similar action was taken against San-Gri-Na and Silph.

Sangra Bath Salts

W. E. Learned also put out "Sangra Bath Salts," which was advertised as a means of reducing fat, and, incidentally, of relieving rheumatism and neuritis. According to the advertising, Sangra Salts was:

"A scientific combination of imported mineral salts, guaranteed to dissolve unhealthy, fatty tissue and relieve swollen joints, neuritis, rheumatism, etc."

Learned led the fat public to believe that Sangra Salts was prepared "under the formula of a French chemist" and had been "used with amazing success in Europe for the treatment of obesity at fashionable sanatoriums, where wealthy Americans and Europeans paid exorbitant fees to rid themselves of excessive fat." And what was this marvelous French formula, made of imported mineral salts? Let Uncle Sam answer:

"Analysis of Sangra Salts by chemists in the Bureau of Chemistry of the United States Department of Agriculture shows that this preparation is essentially magnesium sulphate (Epsom salt) flavored and colored lavender."

Seven ounces of epsom salt, which could be purchased for a few cents in any drug store, brought $1.50 when sold as an obesity cure by Mr. Learned under the name Sangra Salts. The salts were also declared a fraud.

The one unfortunate feature about frauds of this kind is that under the law there is nothing to prevent a quack like Learned from continuing to carry on his fraudulent business, provided he sees fit to divide his profits with the retail druggists of the country and sell through the ordinary retail channels of trade, instead of direct to the public through the mails.

Obesity is not looked on by the government officials as a disease, and, therefore, substances sold for the alleged cure of obesity do not come under the technical classification of drugs as laid down by the federal food and drugs act. This means that obesity cures, even though they may

You Can Take Off a Double Chin With Dr. Folts Soap

No need of wearing disagreeable appliances—No need of massage or lotions

Astonishing results of Dr. Folts' Soap to take off double chins, reduce hips, arms, legs, busts—proclaimed by many of New York's most beautiful actresses—La Sylphe, Internationally known dancer, and Madame La Chapelle, Premier danseuse, state that they would not be without Dr. Folts' Soap.

Hundreds of fat people, now slender, are ready to-day to testify about the merits of Dr. Folts' Soap, as the safest, easiest and quickest way to take off fat from parts where it shows, without affecting other parts. Dr. Folts' Soap is the latest and most up-to-date way to regain slenderness without the use of dangerous drugs, exercises, diets, etc. BUT, BE SURE you get the original reducing soap, called Dr. Folts' Soap, and save yourself from disappointment.

This soap, when used as per directions, is absorbed by the tissues, and melts away the excess fat almost under your very eyes. It is also incomparable to improve the skin and rid it of ugly pimples or eruptions, because it has a basis of antiseptic ingredients invaluable to beautify the appearance of the skin. WILL NOT LEAVE YOU FLABBY OR WRINKLED AFTER THE REDUCING HAS TAKEN PLACE.

One woman wrote that one cake of soap rid her of a double chin of years' standing. Another states that with three cakes he reduced 15 inches in the hips. Another, again, used it on her legs with remarkable results. In most cases it takes two to three cakes to obtain satisfactory results. Dr. Folts' Reducing Soap always works wonders, but do not accept a cheaper imitation. Price 80 cents a cake, three for $1.20. Full directions how to use Dr. Folts' Soap come with each cake of soap. If your druggist does not carry Dr. Folts' Soap in stock he can get it from his wholesaler or you can send a money order or check, direct to the Scientific Research Laboratories, 1841 Broadway, N. Y. City.

On sale at any of Walgreen's, Owl Drug, Buck & Rayner's, MacLean's or Home Drug stores.

Dr. Folt's Reducing Soap swindle, as advertised in Chicago newspapers.

contain powerful and poisonous drugs, as many of them do, are not subject to the federal law, and the exploiters can lie with impunity in the sale of them.

A Child Is to Be Born—

By Anna Ross Lapham

IN PLANNING the diet for the expectant mother, one must remember that the complex chemical processes of the human body which are called metabolism are most accurately adjusted to meet the requirements of the normal person.

The demands made on the mother by the unborn child put an extra strain on her kidneys, liver, heart and other organs, and not infrequently her metabolic balance is disturbed and illness results.

Before planning a diet for the expectant mother, then, the physician must determine the state of her health and the period of her pregnancy. If the woman is in good health and in the early months of pregnancy, there is no reason why her diet should be changed. But in her work of building up a new person, she has special need for an ordinary amount of easily digested and easily assimilated food. Her diet must provide sufficient calories for those needs, with proteins, fats, carbohydrates and mineral salts in proper proportions.

Protein Foods Sometimes Forbidden

Meat, fish, fowl and eggs are almost wholly protein, or nitrogenous foods. It requires more work on the part of the kidneys to eliminate their waste after digestion. Therefore, if the kidneys are showing signs of failure, or if the physician is anxious to avoid the possibility of placing an undue strain on them, he limits the amount of meat, fish, fowl and eggs that the expectant mother is permitted to have. She should not eat more than four ounces of meat, fish, fowl or eggs in any one day, nor more than four ounces of any combination of them.

Carbohydrates—the sugars and starches, such as rice, potatoes and breads—take the place of the forbidden proteins. But care must be taken in their preparation in order that they may be palatable and nourishing. Rich pastries and all foods, whether protein or carbohydrate, when fried in fats, become highly indigestible; they have no place on the menu of the woman about to have a child. Well cooked cereals, vegetables, especially the salad vegetables, milk, cream and butter form the basis of her diet. With these as a foundation, an unlimited variety of foods may be prepared. Fruits in any form, including jellies and preserves, may be used.

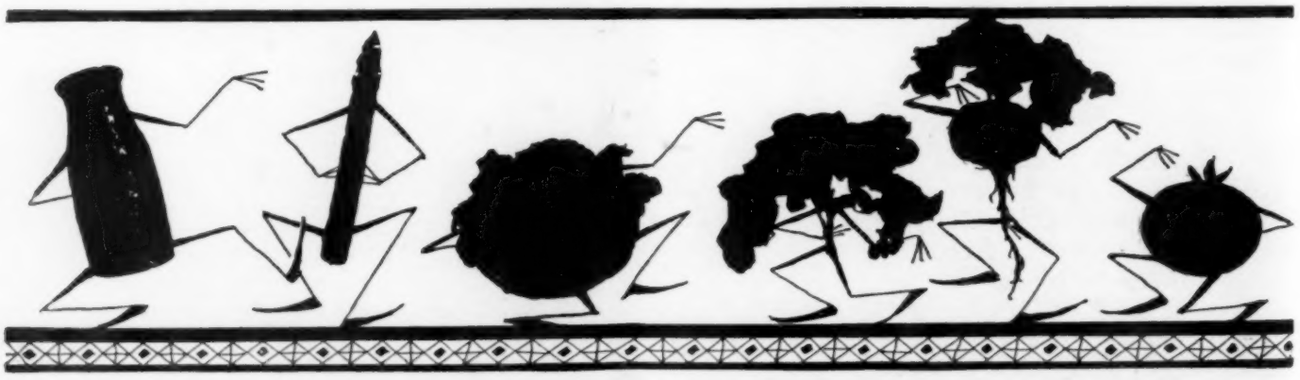
Appetite at First Is Fickle

During the first three months of pregnancy the appetite is fickle, and there is considerable tendency to nausea and vomiting. When this is the case, it is desirable to serve small portions of foods rich in carbohydrates, at three or four hour intervals.

A sample diet list is presented at the conclusion of this article through the courtesy of Dr. Joseph B. De Lee; it is taken from his "Booklet for Mothers."

During the second three months, the stomach is more settled and larger meals with less frequency may be advisable. A diet list for this period is appended.

When there is only slight nausea and vomiting, and that in the morning, simple dietary regulations are usually sufficient to cure the condition. When the vomiting is excessive it is a symptom and warning of toxemia, as important as high blood pressure, swelling of the ankles or albumin in the urine.



—The Diet *of the* Expectant Mother

Fifth of the Series

Promptly on awakening, the patient is served a cup of very hot coffee with two crackers. These she takes without lifting her head from the pillow. After this meal she remains in bed for an hour. She is then permitted to rise and have her breakfast.

Since an irritable stomach will tolerate a dry meal, while liquids provoke vomiting, the breakfast should be served without a beverage. It may be selected from such foods as toast and jelly, baked apple, cornmeal or oatmeal mush, crisp bacon and muffins. The other meals may be as usual, unless the nausea persists throughout the day. Liquids, which are forbidden during meals, may be taken freely between meals. Cold foods, especially liquids, are better tolerated than warm. Ice cream, sherbets and chilled milk and fruit beverages are of great value.

May Be Necessary to Withdraw Foods

In extreme cases of nausea and vomiting (when the patient's physical condition suffers), it may be necessary to withdraw all food by mouth for twenty-four hours or more, during which time the patient is nourished by rectal feedings. Under such circumstances she should be in a hospital and under the supervision of her physician.

High blood pressure is a symptom of toxemia. The diet prescribed should depend entirely on the underlying cause. If the increased blood pressure is the result of too great strain on the kidneys, the diet should be one that would put less work on those organs.

The patient is put on a low protein, low salt diet. Meat, fish, fowl and eggs and all foods prepared from them are forbidden. Vegetables (except peas and beans), all fruits, cereals, milk, cream, butter and creamed vegetable soups are permitted. Condiments or spices are particularly irritating to the kidneys and blood vessels and must be omitted. Unsalted food is unpalatable, and will eventually ruin the appetite, but salt is harmful when the kidneys are not doing their work properly, so a very little—the minimum tolerated by the appetite of the patient—is used in the preparation of the food, and no salt or pepper is allowed on the tray.

Special Diets for High Blood Pressure

Some authorities forbid the use of milk in the treatment of high blood pressure and kidney disease, while others recommend it. Some give the Karrel diet, milk, to the exclusion of all other food. The Karrel diet is begun by giving from 4 to 6 ounces of milk three or four times a day. This amount is gradually increased until the patient is taking 2 quarts of milk a day. To render the milk palatable, and to prevent diarrhea, a tablespoonful of lime water is added to each serving.

If diarrhea occurs, the milk is not being properly digested. The amount must be cut down temporarily, and increased again as soon as the stomach is able to bear it. If desired, the milk may be predigested. When constipation results from the prolonged milk diet, stewed fruits may be given with the afternoon portion.

The choice between the Karrel and the dry diet must be decided by the doctor in charge, who will be guided by the patient's response to treatment. After five or six weeks, a normal diet is gradually resumed, but with the addition of a generous supply of milk.

As the baby grows, its demand on the mother for food containing mineral salts becomes greater. The mother's food must contain these salts or the child's needs will be supplied at the expense of the mother's tissues.

The minerals that are so vital to the growth and development of the child are the salts of lime, phosphorus and iron. Some foods, like milk, cheese, egg yolk and oatmeal, are rich in lime salts and phosphates, while spinach, asparagus, cabbage and cauliflower contain more iron than most other vegetables.

Since irritability of the stomach and fickleness of appetite are always less in the later months of pregnancy, a generous supply of these foods will be tolerated by the mother and will insure sufficient minerals for every need of the child. The appended sample list is taken from Dr. Lee's "Booklet for Mothers" and gives helpful suggestions for a normal diet after the seventh month.

Limiting the Growth of the Baby

Some physicians attempt to restrict the growth of the child in the later months of pregnancy, in the hope of making the mother's labor easier. This object they seek to accomplish by reducing the fats and carbohydrates in the mother's diet, and by omitting those vegetables that are rich in lime salts and phosphates.

Such a program is fraught with danger to the mother, because it compels the use of too much protein food or provides too little nourishment for her. In the interest of the child, such a diet is not to be recommended, because the mineral salts are needed for its development. Most authorities agree that the nutrition of the mother has little effect on the size of the child.

Many prospective mothers take on an excess of fat during the later months of pregnancy. To combat this tendency, it is better to limit the amount of food eaten and to increase the amount of exercise, rather than to eliminate the carbohydrates from the diet. Such measures should be undertaken only with the consent of the physician and under his direct supervision. Great care must be exercised to prevent too great loss of strength.

On the other hand, every effort should be made to build up the undernourished woman and increase her vitality. To this end she should be encouraged to increase the quantity and concentration of her food, to drink copiously of pure water between meals, to take moderate exercise in the open air and sunlight, and to sleep at least ten hours daily.

The expectant mother may develop signs and symptoms of toxic poisoning, which may be overlooked by herself and her family. Therefore, it is the part of wisdom for any woman, as soon as she believes she is to have a child, to put herself under the care of a competent physician, and to follow his advice implicitly. Since diet plays such an important rôle in the cure of many of the toxic conditions to which she is subject, it behooves her to adhere faithfully to the diet regulations laid down for her.

DIET FOR FIRST THREE MONTHS

Before arising:

Two crackers, or slice of toast.
Glass of milk or weak hot coffee with cream and sugar.

Breakfast:

Orange, apple, dish of stewed prunes or apricots.
One egg, or one small chop, or two slices of crisp bacon.
Two slices of toast with butter, or one shredded wheat biscuit with cream and sugar.
Cup of cocoa, or postum, or glass of fresh milk.

At 10 o'clock:

Three oatmeal crackers, or nabisco wafers.
Glass of milk.

Lunch:

One cup of cream of asparagus or celery.
Two salt soup crackers.
Lettuce, tomato, endive, chicory salad with sugar and a dash of lemon or sweet vinegar—no spices.
Two thin slices whole wheat bread, or toasted rye bread.
One pattie of fresh butter—preferably unsalted.
Two tablespoons of ice cream, or custard, or floating island.

Tea:

One cup of chocolate, or tea with lemon and sugar.
One piece of simple cake 3 by 2 by 1 inches, or crackers.

Dinner:

One cup of bouillon, or vegetable soup.
Two salt soup wafers.
A small lamb chop, or equivalent of steak, or veal, well done.
Two tablespoonfuls mashed potato, or carrots.
Two thin slices old bread, or toast, or soda crackers.
One pattie of butter.
Fresh salad, tomato, or lettuce, or endive, without spicy dressing.
Sweet dessert, lemon ice, blanc mange, ice cream, ½ cup.

At night:

Glass of hot or cold malted milk.
Two or three oatmeal crackers.

DIET FOR SECOND THREE MONTHS

Breakfast:

One orange, one-half grapefruit, or stewed prunes.
Oatmeal or other cereal and cream, rice with honey.
One egg with two slices of crisp bacon.
Two slices of toast, or corn muffin or roll.
One pattie fresh unsalted butter.
Cup of cocoa, weak coffee, or postum, with sugar and cream.

At 10 o'clock:
A glass of milk.

Lunch:
Cream of celery or tomato soup.
Two salt sticks.
One scrambled egg with strawberry preserve.
Lettuce, tomato or endive salad, sugar and lemon dressing.
Two slices old bread, or toast, or crackers.
One pattie of butter.
Dessert—blanc mange, ice cream, custard, ½ cup.

Tea:
One glass of chocolate malted milk, or tea with lemon and sugar.
One American or cream cheese sandwich.

Dinner:
Plate of vegetable soup (little spice) or cream of corn, celery.
Two salt wafers.
One ½ inch lamb chop, or equivalent of fish or steak, well done.
Mashed or baked potato, or carrots, or spinach, ½ cupful.
Salad—lettuce, tomato, cabbage, endive, with sugar, lemon and oil.
Dessert—jelly roll, ice cream, fruit ice, ½ cup.
Plain cheese with hard cracker.

At night:
Glass of hot malted milk.
Two oatmeal crackers.

DIET AFTER SEVENTH MONTH

Breakfast:
One orange, apple, ½ grapefruit or stewed prunes.
One saucer oatmeal, or other cereal with cream, or rice and honey.
One soft boiled egg with two slices crisp bacon.
Two slices toast, one corn or graham muffin, with butter and syrup.
One cup cocoa, milk, or weak coffee.

At 10 o'clock:
Fresh fruit or fruit juice drink.

Lunch:
Cream of asparagus, celery or vegetable soup (no spice). Plain wafers, unsalted.
One small chop, or one egg, in any fashion.
Salad made with yolk of egg dressing, or sugar, lemon and oil.
Two thin slices buttered bread, toast or oatmeal crackers.
Weak tea, cocoa or glass of milk.

Tea:
Hot malted milk or milk. Cheese sandwich.

Dinner:
Plate of soup (unspiced and with little salt).
Plain wafers.
Baked potato, crushed carrots, spinach or beet tops.
Fish or meat, 3 x 2 x ½ inches, plain sauce.
Salad, lettuce, cabbage, etc.; no spiced dressing.
Dessert, ice cream, plain layer cake, custard, fruit sherbet.
Cheese and Bent's hard crackers.
Nuts, unsalted and well masticated.

A Community Turns Milkman

By Frances Mary Hughes

TARBORO, N. C., with a population of some 4,500, has been its own milkman for the past seven years. In 1917, the U. S. Public Health Service made a survey of the county, and it was decided that the milk supply, among other things, must be remedied.

At the time several dairymen were supplying the community, but the milk was not safe to use, and it was of poor quality. The people realized it, and as a result the total daily consumption was only 100 quarts. At present it has risen to 500 quarts daily.

When the survey was made, a laboratory and a milk inspector were advised, but the county could not raise sufficient money for such an undertaking. Moreover, the production of a safe milk to be sold raw would have necessitated such expenditures on the part of the dairymen as to force the milk to a price practically prohibitive to the consumer.

But something had to be done, so it was decided to have a municipal pasteurizing plant and establish it in one corner of the water works. A delivery wagon and a horse were purchased. Milk is bought direct from the farmer and is sold directly to the consumer.

When the plan was first put in operation, the farmer was paid 12 cents a quart for his milk, and it was sold at 17 cents a quart. The town had no desire to make this scheme a revenue-producing one, but it planned to pay the running expenses of the plant, as well as to pay back the original installation cost. This was done, and, in 1921, the price of milk was lowered to 15 cents a quart. The cost of the equipment, not including horse and wagon, was $1,800. Two deliveries a day were ample.

Dr. T. E. Tucker, field agent for the U. S. Public Health Service, is in charge of the work at Tarboro. Asked about his work, he replied: "The chief end achieved by our present municipal regulation on milk is that of the guaranteed disappearance of milk-borne diseases, particularly diarrheal conditions in children and typhoid fever. During these seven years not a single case of disease reasonably attributable to milk-borne infection has occurred, and the evidence of summer diarrhea among infants has been reduced to insignificance. The plan carried out in our city is a sure guarantee against milk-borne diseases."

Pictures of Health

Another Group of Photographs Submitted in Hygeia Contest

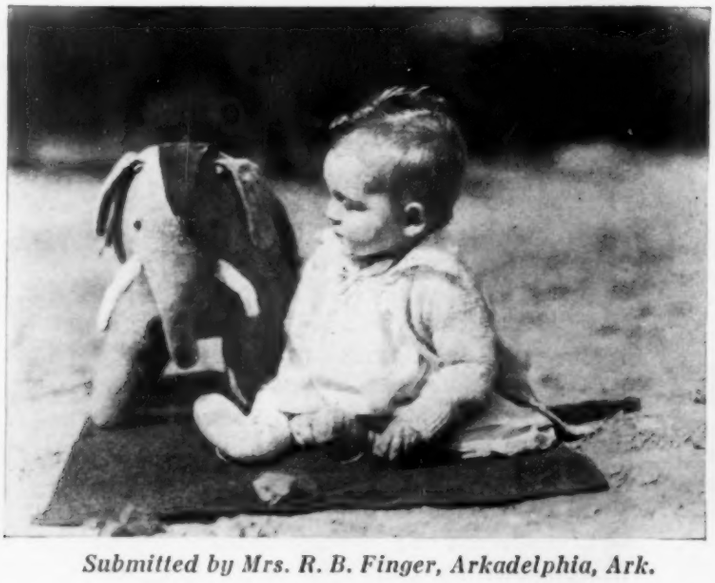
NO GREATER compliment can be paid to youth or to old age than to say, "He is the picture of health." More than 500 "pictures of health" were submitted in the recent health photo contest conducted by HYGEIA. Prize winning pictures were published in the August issue. This month a few more photographs are reproduced.

Most of the photos submitted had to do with children at play or in healthful pursuits. Some were good photography without being good health, while others radiated health but were poor photography. Among those that possessed both qualities there were so many almost on a par that the judges had difficult going.

Two amateur photographers, a doctor and a representative of the Eastman Kodak Company, made the final selection.

An interesting exhibit from a city health department was a layout of baby pictures, representing all the babies born and registered in that city during a certain period. Schools sent some good group pictures of health plays, gymnasium work and outdoor sports.

They're Biting. Submitted by Michael Greenan, Pawtucket, R. I.



Submitted by Mrs. R. B. Finger, Arkadelphia, Ark.

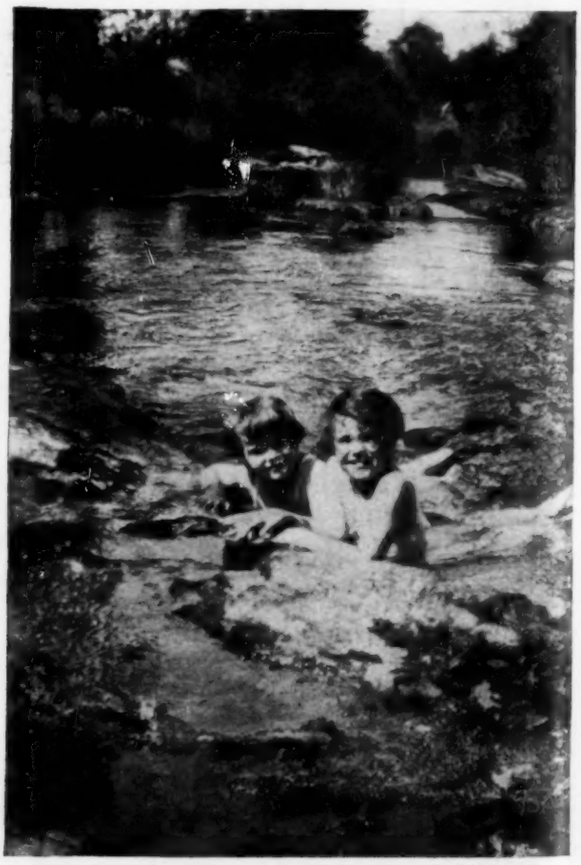
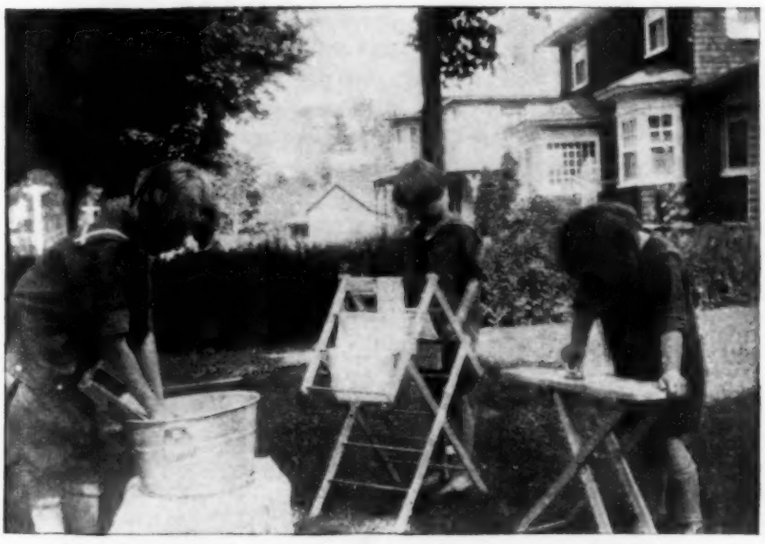


Photo of Dorothy and Margaret Jackson, Pomeroy, Wash.

Photo of John Henry Lindberg and his mother of Minneapolis.



Submitted by Mrs. Ralph H. Bolster, Montgomery Center, Vt.

Photo of Alice Gardiner, Salt Lake City, Utah.

Washday in Mexico. Submitted by Hazel McAllister, Bethel College, Newton, Kan.

Patients at the Indiana Village for Epileptics at work in a cornfield.

The Problem of the Epileptic

By Donald E. Bell

THE problem of the epileptic is threefold. It is personal from the point of view of the epileptic. It is social from the point of view of the family and the taxpayer. It is medical from the point of view of the physician.

The unfortunate child that has epilepsy is usually forbidden to attend the public school. He cannot play with other children, for many of their sports are dangerous to him if he should have a seizure, and often he is shunned because of his affliction.

Employment Difficult to Obtain

When he grows up, his problem is increased. No industrial plant will employ an epileptic on account of the danger. A woman with epilepsy cannot work in the kitchen, because of the danger of falling in the fire or being scalded. Frequently employment of any kind is difficult to obtain. Social pleasures are denied on account of the ever present danger of a seizure. Marriage should not be thought of. Very often such marriages are unhappy and, if children are born, they are likely to become epileptic.

The family of an epileptic knows well the embarrassment when friends call, the constant care of the patient that is necessary and the often fruitless search for a cure.

It is the person whose contact with the epileptic is limited to seeing an occasional seizure on the street that needs to be told there is one epileptic for every 200 persons and that one midwestern state epileptic village expended over a quarter million dollars last year. Very few epileptics are in state institutions. Many more are nonproducing members of society and are cared for in private homes. Many more are in our jails, either because there is no room for them in state institutions or because in an epileptic delusion or mania they committed a crime.

The medical study of epilepsy extends back as far as written history itself. To the ancients it was a disease of mystery, and today it is still a much misunderstood disease. The Greeks called it the sacred disease, because the priests of Apollo either were or pretended to be in epileptic fits when they gave their prophecies. Hippocrates, the father of medicine, in his writings states: "It is thus with the disease called Sacred: it appears to me to be nowise more devine nor more sacred than other diseases, but has a natural cause from which it originates like other affections."

No Two Cases of Epilepsy Alike

Epilepsy cannot be regarded as a disease in the same sense as can diphtheria or scarlet fever. In each of these there are certain definite symptoms, which are due to a definite bacterial cause, and which may be prevented by immunization or cured by antitoxin. No two epileptics are alike as to cause or symptoms. Not all convulsions are due to epilepsy, nor do all epileptics fall in hard convulsive seizures.

Epilepsy is usually due to an hereditary predisposition plus an exciting cause. It is characterized by recurrent abrupt attacks of impairment or loss of consciousness, with or without

convulsions. It is a chronic progressive disorder and is accompanied by mental and often physical degeneration.

During the last half century the cause of many diseases has been definitely ascertained. Since epilepsy is not a disease in the same sense as diphtheria, diabetes or pneumonia it is impossible to predict that such a cause will ever be found. Certainly much research has been done, and the problem has been studied from many angles. It seems evident there is some hereditary predisposing cause. If not, why should one person who has been hit on the head, had a sunstroke or meningitis develop epilepsy while another person who has been in the same condition recovers and remains normal?

There is a history of epilepsy, insanity or alcoholism in almost two thirds of the families of epileptics. In some cases there are mental defects that may be traced back many generations. In countries with an inbred population, like Korea, there are twenty-four epileptics per thousand population. In the United States with a diversified population the rate is five per thousand. Blood relationship of parents is a factor. Marks of hereditary syphilis are often found in epileptic children.

Causes of First Attack

In about half the cases no cause can be found for the first seizure. In the remaining cases the causes most frequently ascribed are: head injury, heat prostration, meningitis (brain fever), disturbances of the stomach and bowels, menstruation, teething, overexertion and fright.

A study of the ages at which the first seizure occurs is instructive. Seventy-five per cent of all cases commence under the age of 20. Twelve per cent commence during the first year of life. During the time of the eruption of the teeth and at the age of puberty many cases have their beginning. The disease, then, seems to begin during the growing period, when the nervous system is not yet stable. Anything that lowers the resistance of the nervous system may cause a convulsion, whether this is teething, puberty, meningitis or injury. Epilepsy is most likely to occur in those who have inherited a defective nervous system.

Seizures of Two Types

No two epileptics have seizures exactly alike. For convenience in classification two types are recognized.

Light seizures are called petit mal, which in French means little sickness. In this type the epileptic becomes momentarily unconscious but does not fall. He suddenly stops whatever he is doing, his face has a slight pallor and his fingers twitch slightly. He then resumes talking or working, often without the knowledge that he has had a seizure.

In the grand mal type, there is a true convulsion. Some epileptics can foretell a convulsion by certain peculiar sensations that they have learned to recognize. Often the fall is accompanied by a sharp cry. After a few seconds of rigidity the convulsive movements commence and last for several minutes. The face becomes bluish, and the breathing rapid and noisy. The tongue is often bitten; injuries and burns may occur.

In the Jacksonian type of epilepsy the convulsive movements always have their beginning in the same part of the body. This type is usually caused by a growth or injury of the

The men play croquet in front of one of the colony houses at the Indiana village.

brain. If many convulsions occur close together without the regaining of consciousness, the condition is called status. Fever, exhaustion and sometimes bronchopneumonia and death result.

After an epileptic has had seizures over a period of years a permanent change in his personality and mentality occurs. The very fact that seizures occur indicates a defective nervous system. The seizures themselves cause further deterioration. Lastly, the patient's own knowledge of his condition and the handicaps that it imposes on him cause a perverted outlook on life.

Are Apt to Be Self-Centered

Many epileptics are selfish and self-centered. They feel that trivial matters should be of as much interest to others as they are to themselves, and any lack of attention is resented. They are irritable and excessively quick tempered. This is most marked preceding or following a seizure. They are discontented with their lot in life and feel little gratitude to those who care for them. Often they will wander or run away from home.

Periods of depression during which the patient will sit around in a despondent mood and sometimes refuse to talk or eat may alternate with periods of excitability characterized by incessant and incoherent talking, by singing or by violence. In these times suicide and homicide must be guarded against. Along with all these manifestations the mind becomes more and more feeble, the reasoning power is impaired and the sufferer even becomes unable to care for himself.

To overcome the problem of the epileptic there must be active and continued cooperation of the three most concerned, the patient, his family and the physician. The one whose misfortune it is to have epileptic convulsions must realize that he has a chronic and progressive disease which imposes limitations on his life. He must be content with his lot and must be willing to forego all occupations and pleasures that are dangerous. He must learn to control his temper and all morbid thoughts. He must realize that there are many quacks and patent medicines which promise a cure, but which are in reality only exploiting his misfortune to their own selfish ends.

Should Fight against Despondency

Those who care for the epileptic should not allow their sympathy to cause the patient to become self-centered nor should they permit the trials of his care to make him more despondent and dissatisfied. They should see that the plan of treatment outlined by his physician is rigidly adhered to. A record should be kept of all seizures.

The physician's part consists not merely in an occasional office visit, but in a careful physical examination, the treatment of any defects or disease conditions of the body, and the study of the patient over a period of months and years, if necessary. It is only in this manner that the greatest benefit can be derived.

Glaucoma

or

Hardening *of the* Eyeball

By Edward Jackson

Dimness of sight may creep on so gradually that the victim may scarcely notice it or may think it is only the usual loss of sight that comes with age.

WHEN a balloon is being filled with gas, the sides of the flat, folded, collapsed bag begin to separate, straighten out and bulge. At first perfectly soft, they make more and more resistance until the balloon keeps its shape against the wind and the net that encloses it.

If the eyeball is cut and its contents run out, it collapses like the empty balloon. If it gets soft, the lids and the muscles that move it press it out of shape. The eyeball has to keep its shape in order to focus light, so that one can see distinctly. The white of the eye, called the sclera, and the clear front of the eye, the cornea, form together a closed bag. This bag collapses when it is empty, and only takes its proper shape when filled with liquid contents. A certain amount of pressure is necessary to round it out, so that the cornea will keep its exact shape to bring the light that goes through it to a perfect focus.

Pressure in the Eye

The soft contents of the eyeball include the retina, the delicate lining of the eye, which is sensitive to light like the film in a camera. When a picture has been taken on the retina, the film cannot be taken out and a new one put in to replace it, as can be done with the camera. The picture is sent instantly from the retina to the brain, and the retina is instantly made ready for a new picture, by material brought to it in the blood. The eye must be hard enough to keep its shape against the ordinary pressure made on it by the lids and muscles and so keep its perfect focus; but it must not be so hard as to prevent the blood from coming into it and keeping the retina supplied with fresh material to continue taking its pictures as fast as may be required.

By pressing firmly for a moment on the eye through the closed eyelids, one will find, on opening the eye again, that the sight is dimmed. It will take several minutes for the condition to clear, so that the sight is as good as usual. This is because the pressure interferes with the blood bringing nourishment to the retina. Pressure on the eye increases the pressure within it.

In a healthy eye pressure is kept high enough to keep the curve of the cornea right, and yet not to interfere with the nourishment of the retina. This is done by a delicate arrangement within the eye that keeps fluid coming into and going out of the eyeball at the same rate and that brings it back to perfect balance when the pressure has been disturbed.

If the safety valve does not work, the boiler blows up, which is a very serious matter. If the regulating mechanism of the eye does not work perfectly, the pressure in the eye gets too high, and that is equally serious. The heart keeps pumping blood into the eye, as into every other part of the body. If fluid is not getting out of the eye fast enough to keep the pressure down, the eye gets harder and harder; until, if the action of the heart is strong enough and the pressure of the blood in the arteries is high enough, it will burst the eyeball. This has actually happened when the very tough scleral coat has been weakened by disease.

Preventing Pain and Blindness

But, usually long before it can burst, the eye has become blind, and so intensely painful that few can bear the torture. They have the eye taken out, simply because of the pain, although it does not threaten the sight of the other eye. All the causes that upset the delicate mechanism that regulates the pressure in the eye are not known, but some of them are and can be avoided. Some methods of bringing the eye back to balance are understood.

Glaucoma cannot be prevented with certainty, but in most cases its worst effects—blindness and intense, continuing pain—can be avoided.

To do this, one must know about the danger that threatens. It is a danger of middle and late life.

Glaucoma is rare before 40 or 50 years of age, although sometimes it occurs in childhood. Its beginnings are always insidious. In what is called simple glaucoma, there is no change in the appearance of the eye, and there may be no pain; only the sight gets a little dimmer. The dimness does not in the beginning affect the part of the eye that is used to look directly at a thing, the center of the field of vision. It begins at the edge of the field, especially toward the nose, in the direction seen with the other eye. Or it begins at the edge of the natural "blind spot" of the eye, where one is least likely to notice the dimness.

Gradually the dimness creeps in toward the center of the field of vision and gets greater and greater. This comes so gradually that the victim may scarcely notice it or may think it is only the usual loss of sight that comes with age. Later there is a sudden drop in the sight and generally pain, which may be severe. Then it is too late to regain what sight has been lost.

A different form of glaucoma begins with sudden dimness of sight, all over the field of vision. But this acute glaucoma, too, is deceptive, as to the approaching danger of pain and blindness. In a few hours, or a few days, the attack passes off; the eye recovers its full sight, and the discomfort, which may have been only slight at most, entirely ceases. The eye seems as well as it ever was. There comes a feeling of relief, and the attack is forgotten.

Such attacks are warnings; but, if repeated, they receive less and less attention, until, when the danger actually arrives, it is as unexpected as if there had been no warning at all.

Pain Is Very Severe

The unfortunate victim who is destined to suffer from glaucoma may believe that these preliminary attacks have left him none the worse for their annoying recurrences. But a careful examination of the eye and its vision will show that the recoveries from them have not been quite complete, and that each time a little vision has been lost at the edge of the field of vision or at the edge of the blind spot, where it is least noticed. As time goes on, each attack is more likely to be attended by severe pain and to be followed by more permanent damage to the sight, until the patient realizes that blindness is closing in, with pain that becomes harder and harder to bear.

The disease may require years to run its course to complete blindness. More often it is a matter of a few months or a few weeks. Occasionally, a few days are sufficient to destroy the sight beyond any possibility of restoring it. More frequently, after many light attacks and apparent recoveries, there comes one more severe, which leaves unmistakable damage, and from that time on things go rapidly from bad to worse.

But, whatever course the disease runs, if unchecked, the end of glaucoma is always the same. If the patient lives long enough he becomes entirely blind, and he passes through a period of pain, often so severe that he will demand relief by having both eyes cut out—the only certain way to give relief. Among the blind, no cases are more hopeless than those of absolute glaucoma.

Signs of Glaucoma

The pain of glaucoma is an ache in the eye, like the headache one can get from a tight hat jammed on the head, a cold starting in the head, or a toothache from swelling of the soft pulp in a tooth. At first it is not a sharp, shooting pain, but only a nagging discomfort. It may later become the most severe pain any person can suffer.

The loss of sight in glaucoma causes a general mistiness of everything seen by the affected eye; this condition gets better and then gets worse, but each time the person fails to regain all the sight lost. Sometimes rings of color are noticed around lights at night. But similar rings can sometimes be seen by healthy eyes and may not be noticed at all with an eye suffering from glaucoma.

Perhaps this account of glaucoma resembles the descriptions of disease given in patent medicine almanacs, designed to make every one think he has the disease and needs the medicine. But the only way to prevent blindness and suffering from glaucoma, which causes 12 per cent of all cases of hopeless blindness, is to have a great many people know that there is such a disease and that it can be generally checked, although the sight already lost cannot be brought back.

If this information has once been clearly learned, it may be laid away with the knowledge that if one takes fairly good care of the eyes there is not one chance in ten thousand that one will ever have glaucoma. But if any symptoms should arise that might raise a question of glaucoma, it is worth while to go to a doctor who knows about eye diseases, and to have the question settled as soon as possible. If it is glaucoma, one can face the danger at once. If it is not glaucoma, one can get rid of the fear of it.

The great mass of people will never have glaucoma, if they take care of their eyes by reading by good light, wearing the right glasses if glasses are needed, protecting the eyes from accident, keeping good general health by having teeth, tonsils and appendix taken out if they get diseased, avoiding the faults of diet and excitement that cause high blood pressure, and every day in every way doing the things that keep them in the best condition.

This modern beach party was planned by the family doctor.

Cod Liver Oil *and* Sunshine

Factors Influencing Bone and Tooth Development

By L. W. SAUER

MEDICAL research has, in the past half century, made a number of epochal discoveries. The germs that cause a number of diseases have been discovered; antitoxins for diphtheria, tetanus and scarlet fever have proved their worth; insulin is a boon to the diabetic; and numerous other medical discoveries relieve human suffering. The domain of medicine that is now receiving its due share of consideration is prophylactic medicine. We are beginning to realize that much suffering and illness can be avoided if proper precautions are enforced.

One of the most rapidly growing branches of preventive medicine is that known as prophylactic pediatrics. It reaches its highest degree of perfection in the modern methods of infant feeding, in the prevention of the diseases of the new-born and in the prevention of contagious diseases. The slogan of today is: Keep the well child well.

Importance of Diet and Hygiene

No one doubts the influence of heredity and severe diseases, such as congenital syphilis and scarlet fever, on the quality of bones and teeth, especially on the unerupted teeth. There are two other factors, however, that play a far more important rôle on the quality of the bones and teeth; namely, diet and hygiene. Pediatricians have long known that an exclusively boiled milk and cereal diet for older infants is not compatible with health, that the incidence of rickets, scurvy and early tooth decay is high among children so fed.

Standard textbooks of a decade ago emphasized the importance of cod liver oil, liver purée, green vegetables, orange juice, sunshine and fresh air in the maintenance of health of the growing child. Only in recent years, however, have we discovered the importance of vitamins, minerals and sunlight.

Rickets Results in Faulty Teeth and Bones

The most important disease that leaves its traces in faulty bone and tooth development is rickets, a disease first described by the Englishman Glisson, in 1650. Until then, and for over 200 years later, this disease was often confused with other conditions such as scurvy, rheumatism and other diseases of the bones.

Cod liver oil, first used by fishermen of northern Europe, had no place in medicine until 1822, when Dutch and German physicians began prescribing it for rickets. In the last half of the nineteenth century it fell into disuse, and its value in the treatment of rickets was not appreciated until Kassowitz and others in Austria proved its worth in the early part of the twentieth century.

Sun baths prevent and cure rickets.

We now know that this unique disorder of nutrition, which exerts its harmful effects on bones and teeth, is characterized by a disturbance in mineral metabolism. It produces a faulty deposition of calcium phosphate in growing bones and teeth. It is most frequently encountered in infants and young children who have been ill or who have failed to receive a sufficiency of antirachitic vitamin and sunlight.

Cod Liver Oil as Cure for Rickets

McCollum of Johns Hopkins, by means of special diets, was one of the first to produce, prevent and cure experimental rickets, including dental caries. Chemical analyses of the blood and microscopic examination of the bone structure by Howland, Shipley, Park and others of the same university showed that the faulty deposit of calcium phosphate is not inherent in these bones and teeth, but is due to a deficiency in the blood serum, which bathes and feeds these structures of the body. This deficiency may be due to an insufficiency of these minerals in the food, to excessive losses of them, or to a failure of the body to hold and utilize these essential elements in the proper manufacture of bones and teeth.

These scientists also showed that cod liver oil contains a specific curative substance, which we now call antirachitic vitamin, fat-soluble A. This antirachitic vitamin, most abundant in fresh cod liver oil, also occurs to a limited extent in fresh egg yolk, milk, cream and butter, and green vegetables. It mobilizes, in a physiologic way, the calcium and phosphorus of the blood serum, which bathes the bone and tooth producing structures of the growing body.

In the last decade we have learned properly to appraise sunlight. We had long known that besides the warmth which the sun radiates to the earth, it sheds invisible rays that make plants and animals grow. Although sunlight had long been known to have curative qualities, only in the last few years have we proved their great value for growing children. Sun baths on warm days are very beneficial. So that these health-giving rays may exert their full measure of good, it is essential that the coat of tan be acquired gradually. The head and eyes should be protected, but all clothing should be removed for the ten or more minutes that the entire front and back are exposed to the direct rays of the sun. On very hot days sun baths should be given before eleven or after three o'clock. The beneficial action of sunlight by direct exposure of the body is probably due to the formation or increase of an antirachitic vitamin in the skin, the skin capillaries or their contents.

Huldschinsky, in 1919, showed that rickets could be cured with artificial sunlight, and since then much work has been reported showing that this means of prevention and cure has a definite place in the care of growing children, especially in the winter and spring months.

Sunlight Is Essential

Hess of New York and Gyorgy of Heidelberg have shown more recently that if milk, cereal and other foods are exposed to these artificial ultraviolet rays for half an hour just before being fed, rickets can be cured. Sunlight, both natural and artificial, produces or increases the antirachitic vitamin.

Recent publications emphasize the importance of these same factors in the care of the expectant mother. Pregnant women should receive not only an ample, well-balanced diet containing an abundance of milk, cream, butter and green vegetables, but they should receive cod liver oil daily and spend much time outdoors in the sunshine. After the birth of the child, the nursing mother should continue the same regimen during the entire period of lactation. Infants should receive liberal quantities of cod liver oil during the first few years of life.

The conclusion to be drawn from the recent contributions in this branch of preventive pediatrics is that rickets and dental caries can be greatly reduced (possibly eradicated) by the judicious use of these two potent agencies—antirachitic vitamin and sunlight. This is especially true if acute and chronic diseases are prevented.

Measuring Human Energy

By KATHERINE BLUNT

A Simple Explanation of Metabolism and of the Method Used in Measuring It

HOW fast does a man produce energy? How fast is the fire inside his body burning? Does he produce energy faster than another man or woman? Does a child's fire burn at a slower or a quicker rate than a grown person's?

I shall try to answer these questions and to describe some of the measurements on children and young women that have been taken at the University of Chicago.

The food a person eats is combined with or burned by the oxygen he breathes to form tissue and energy. It is as truly a burning as the burning of a fire, and is accompanied by the production of heat. This process is called metabolism. If not enough food is present, the oxygen combines with or burns the body substance itself.

Oxygen Consumed Is Measured

When this burning is rapid, much oxygen is taken in through the lungs and much heat and energy are produced. When the burning is slow, less heat and energy are produced and less oxygen is used. Parallel with the production of more or less energy is the greater or less muscular tension or activity of the body.

To determine the amount of energy produced, scientists measure the amount of oxygen consumed, or the amount of heat produced. The heat produced when a person is lying quietly without food is known as the basal metabolism.

First, I shall describe the kind of experiment performed to measure the oxygen consumed. The subject lies perfectly quiet and relaxed on a couch. He has come for the experiment before his breakfast and has been quietly resting for a half hour. He is connected to the apparatus by a tube which he holds in his lips and into which he breathes. A little clip on his nose prevents his breathing out into the room.

The tube is connected with a cylinder containing the oxygen, with a jar filled with material that absorbs the carbon dioxide given off in breathing, and with a device for keeping the oxygen circulating through it all so that the patient breathes normally and without any difficulty. The subject breathes through the tube for ten minutes. Then the amount of oxygen he has used is noted.

From this amount of oxygen is computed the amount of heat, or energy, produced in the ten minute period. The report of the basal metabolism is usually made in calories produced during twenty-four hours.

Adults, particularly university students, are interested in the test and are ideal subjects. Children, however, seem sometimes to lack scientific curiosity. They get bored with lying still for ten minutes. That is a long time to "breathe into the machine," as they say, so stories are read to them to help them along and appealing rewards are devised for being quiet and not wiggling about.

Children Form Club

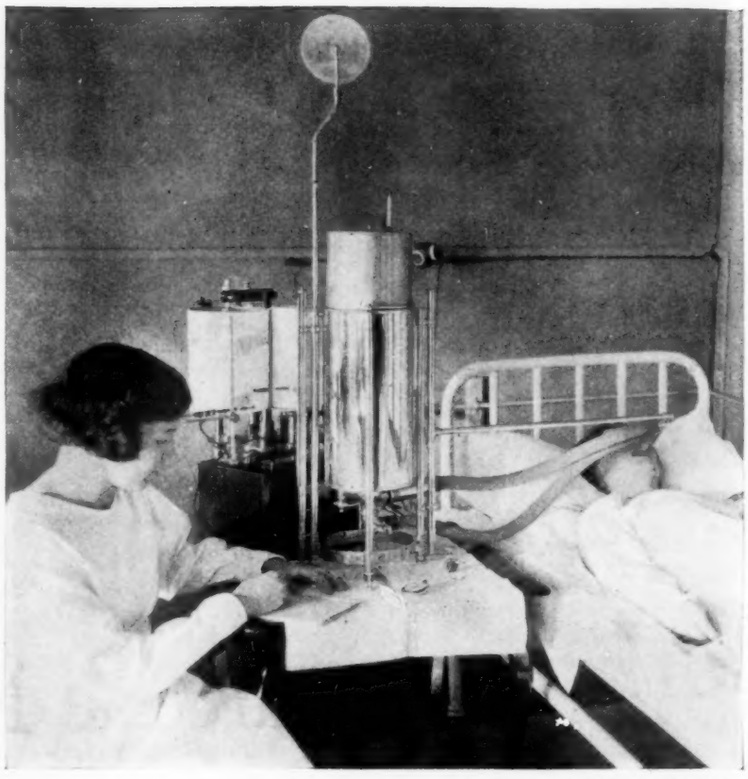
Several years ago a number of tests were made on a group of underweight children in a health class at the University of Chicago. These children on their own initiative formed a "basal metabolism club," so called by themselves, and considerable prestige accrued from belonging to it after successfully taking the test. After they became interested, observations on them were as satisfactory as on adults.

For children, the oxygen consumption and basal metabolism always run higher than for grown persons in comparison with their weight. That is, every pound of the child's body is using up oxygen and producing energy faster than the adult's body. The child lives harder than the man or woman, even when lying quietly. No

wonder that children eat so much food. A child of 10 or 12 years often eats more than his parents. Children have not only this higher basal requirement, but in addition the very high requirement of their greater activity; both must be met by food.

A somewhat disturbing finding about the underweight children was that some of them had a basal metabolism decidedly higher even than the normal child. Nervous, "jumpy" underweight children used up more oxygen than their normal companions of the same weight. Therefore, they needed more food, for the oxygen was used for burning either food or body substance. Yet because they were generally below par, their appetites were not always as good as those of the healthy child, so that eating enough was hard work, and naturally, though unfortunately, they tended to stay underweight.

Most of the young women students showed an oxygen consumption agreeing closely with the generally accepted standards for women. The standards for women run a little lower than those for men. Women on the average use up oxygen at a rate per pound about 7 per cent lower than do men. As to why there should be this difference science is not certain. Maybe it is because the woman is apt to have less well developed muscles and a little more fat in her body than the man, and fat does not take such active part in metabolism.



Courtesy The Modern Hospital

A woman is breathing into the apparatus, which will measure the amount of oxygen she is consuming.

After it was found that some underweight children had high oxygen consumption and high basal metabolism, it was decided to learn whether underweight young women also showed this irregularity. The possible line of argument was that the women might be underweight because of abnormally high oxygen consumption and it might be hard for them to eat enough food to keep up with their oxygen consumption and prevent them from burning body substance. Hence their body weight might stay down.

Such was not the case with most of the underweight women tested. Their oxygen consumption was just what has been found normal for women of their age and weight. The reason they were underweight in most cases was merely because they were not eating enough food to supply their energy requirements.

One graduate student found this out by weighing all the food for two days, following the girls around the cafeteria and into the dormitory or homes with her scales. Her estimate as to what they should eat averaged at the very least 2,000 calories a day. Instead, she found that more than three fourths of them were eating less than 2,000 calories, and more than half less than 1,800 calories. They had developed bad habits of being in a hurry or thinking they did not want to eat. When they were convinced what the trouble was, some of them made serious efforts to eat more and to bring their weight to normal. After they had succeeded, it was most encouraging to hear them tell how much better and more energetic they felt, how much more like doing real work and real play.

Just as children have a higher oxygen consumption or basal metabolism for their size than the average young man or woman, so old people have a lower oxygen consumption. The slowing up of body processes when one grows older is felt not only in diminished energy in the figurative sense but actually in the physical sense. The body of the aged man or woman uses up less oxygen than was used in youth, produces less energy and so needs less food.

In the last few years the physician has begun to make use of basal metabolism observations on his patients. In certain diseases, particularly of the thyroid gland, the basal metabolism is usually abnormal, so that a metabolism test is of great help in diagnosis.

Thus the measurement of how much oxygen is consumed by the human body has given important knowledge of human energy production for all ages and for well and for sick people, and has given vital information as to food requirements. Further investigations are constantly being made in this important field.

By
Clifford
B. Farr

"Yond' Cassius has a lean and hungry look."

Bodily Structure *and* Mental Make-Up

How Closely Are They Related?

Let me have men about me that are fat;
Sleek headed men, and such as sleep o'night;
Yond' Cassius has a lean and hungry look;
He thinks too much; such men are dangerous.
—*Julius Caesar, Act 1, Scene 2.*

TAKING this apt quotation from Shakespeare as a text, a German writer has recently written a book (E. Kretschmer, "Physique and Character") that has revived the interest of physicians in an ancient, almost forgotten topic. From the earliest days of medicine almost to our own time medical observers attached great importance to physiognomy and bodily structure, and were wont to base important conclusions as to character, temperament and liability to disease on their more or less intuitive judgment as to the patient's constitution.

Character Analysts Were Busy

Almost every one is familiar with popular expressions that have come down from those days, such as apoplectic habit, gouty diathesis, sanguine temperament. While many of these expressions embodied sound observations in regard to the personality—anatomical, physiologic or psychic—they were not capable at that time of measurement or clear definition.

It is true that men of more ability than scientific discrimination strove to establish definite relations between the irregularities of the skull or bumps and mental qualities on the one hand, and between facial expression and character on the other. They succeeded only in establishing pseudosciences (phrenology, for example) and have generally been regarded as little better than charlatans.

As medicine became less of an art and more of a science, and particularly with the advent of bacteriology, less than half a century ago, physicians and scientists turned their attention more to isolated facts and details, about which they could get exact and even measurable information. They were inclined to neglect the more glittering generalities which, to use a vulgar expression, were hard to nail down. The tendency was to pay more attention to the bacillus and less to the patient. But the cycle has been completed, and what was good in the old conceptions is again coming to the fore. We now must admit that while a weakly bodily make-up cannot cause tuberculosis it may predispose to it; on the other hand, a normal bodily make-up is one of the best assets in the struggle against this infection.

Now Scientists Are Making Tests

Students of mental disease, from the very nature of their work, have never neglected the patient's general make-up to the same degree as physicians more concerned with physical disease, and they have been the first to welcome a revival of interest in bodily structure, particularly as related to character and temperament.

There would, perhaps, be very little excuse for reviving these old conceptions if nothing new could be added. In the half century of scientific advance just completed, painstaking workers have established a few definite physical types on a firm footing. In addition, external observation and the usual methods of physical examination have been supplemented by x-ray studies, which prove that a man's internal organs are disposed very much as his outward conformation would suggest.

In this way at least two well defined physical types have been set in contrast to each other, neither of which, unless exaggerated, need to be regarded as abnormal. On the one hand we have the elongated, somewhat flat-chested type, tending to leanness; on the other, the wide, broad-chested type "with fair round belly" tending to obesity. These have been described as the carnivorous and bovine types, reminiscent of the tiger and the bullock, but not with the same connotation as regards prospect of survival.

Another new field of inquiry has revealed the important relation between the glands of internal secretion and the physique, as evidenced in the pituitary giant, the eunuch and the cretin. Finally, the sister science of general anthropology has contributed elaborate methods of measurement, primarily designed for the study of human racial types. These methods medicine is now confiscating for the benefit of the individual, and particularly for the person afflicted with mental disease; in other words, with disorder involving the whole personality and behavior.

Two Common Types Have Mental Disorders

A number of physicians have studied groups of mental patients from the point of view just indicated and have arrived at almost identical conclusions. There are two common forms of mental disease that arise independently of any known physical condition. In one type there is great emotional instability, with recurrent attacks either of elation and excitement, or of depression and inactivity. Nearly 60 per cent of these patients are of the thick-set, broad-chested, large-bellied type. If we look at their normal prototypes, the genial, affectionate, demonstrative, sociable personalities whose interests are turned outward, who laugh with those who laugh and mourn with those who mourn, we find in general the same physical type. We have only to recall the successful but sleek politician, the portly promoter, the well-loved but also well-fed pastor.

The other type of mental disease is fundamentally characterized by a shut-in personality, with emotions seemingly inadequate or else suppressed; persons whose interests are turned inward, whose thoughts and feelings we cannot fathom. They are often antagonistic and suspicious. Patients of this type are predominantly of the elongated, flat-chested type, or types closely related. Their normal representatives include shy, reserved people who dislike to show their emotions, often loyal but seldom demonstrative, intellectual, self-sufficient and not dependent on their surroundings for happiness. To this group belong not only misfits but also many men of genius, such as idealists, political or religious reformers and poets. There are numerous measurements, indexes of proportion, photographs and general observations on which any judgment of physical type must be based.

May Avoid Dangers through Early Training

This brief summary has been given principally as a matter of current interest, but it may have a few practical bearings. While it is true that the characteristics of our constitution and temperament are largely inherited and hence beyond our own control or that of our parents, nevertheless these basic assets may be utilized to great advantage in the upbuilding of character and physique if we begin young enough. The slender, asthenic type, by careful attention to training and nutrition, may be developed into the lithe, light-weight athlete; the stocky, well-built person may also develop a muscular physique of a heavier type and, by suitable diet and exercise, avoid the dangers of softness and obesity.

On the mental side the shy, shut-in child may be taught the graces of society and thus avoid the perils of isolation from his fellow creatures. Similarly the opposite type may be trained to school his emotions and to restrain his appetites within reasonable bounds.

HYGEIA
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Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

Is Cancer Contagious?

Today, practically all investigators agree that cancer is not an infectious condition. The only evidence in favor of the infectious origin is that relating to tumor growths in plants and in animals, which, however, is not directly applicable to the human.

Dr. J. G. Adami, renowned as a pathologist, points out that the differentiation between a tumor which is not malignant and one which is of a cancerous type is not clear even to the best of students in the period of change of a tumor from one type to another, such as sometimes occurs. Apparently, some factor develops in the human body that makes it possible for the benign tumor to develop malignant properties. There seem to be undoubted instances in which microbes may be responsible for starting the cells on their malignant career. However, these microbes are not specific in causing cancerous growths, but apparently act in much the same way as tar or any other chronic irritant may act to initiate malignancy in the cells. At present, critical authorities are not willing to grant that any of the evidence as to the infectious nature of cancer is well established.

Secrets of the Blood

Modern investigations of human blood have revealed the fact that the blood of all persons contains substances that have the power of clumping or dissolving the red blood cells of other persons. All human beings may be divided into four groups, according to the manner in which the blood reacts in this test. Studies of various races indicate that the distribution within the blood of these substances varies to a considerable extent with different races.

The application of these tests to medicolegal conditions has been a prominent question. Already the courts in Germany and Austria have begun to consider such tests, although they do not accept the evidence as conclusive. When blood stains are found on clothing in connection with a supposed crime, the test may be used to determine whether the blood stain in question was caused by the person concerned or by the defendant. Obviously, a stain of different blood grouping than that of either person would cause further investigation.

The evidence is also used to some extent in questions of paternity, since it seems to be possible, following the study of the inheritance of blood grouping, to determine the likelihood of paternity, particularly if the blood of the mother and several other children is available.

The Vienna correspondent of *The Journal* of the American Medical Association points out that many legal cases have been reopened lately because persons who many years ago were adjudged fathers of certain children and compelled to contribute to their support now insist that at the time of their first trial these blood tests were unknown.

Indigestible Vegetables

From time to time physicians have published reports of instances in which large masses of vegetable substances have been retained in the stomach for unusually long periods of time. Vegetable fibers, seeds or similar substances are not easily acted on by the digestive juices. Instances have been reported in which celery, persimmons and pumpkin have been thus retained for many months or years. A case has recently been described in which a patient's stomach was found to be obstructed by a mass composed of celery fibers, prune and raisin skins and other residue that could not be digested.

The appetite for coarse food is thus subject to the natural restrictions involving the elimination of such materials as remain permanently

or for long periods of time in the gastro-intestinal tract. These considerations naturally do not concern the additional instances in which persons with peculiar delusions have swallowed nails, screws, safety pins, knives, false teeth and similar materials, which could not be acted on or dissolved even by strong acids.

Marriage Consultation Bureau in Berlin

The city administration of the first district of Berlin has opened a public marriage consultation center to advise persons about to marry as to their adaptability from the standpoint of health. Obviously, both the prospective bride and groom are entitled to know whether or not the person with whom the marriage is to be consummated is suffering from any venereal diseases, any hereditary complaint or any physical disqualification to a permanent and happy union.

The consultation center also plans to advise married persons regarding their adaptability as parents from similar points of view. The bureau does not give advice regarding the treatment of diseases, but issues health certificates to those who are entitled to them.

All persons employed in the center are under oath not to divulge any information that may come to them in the course of their work. The service is handled for the present as a municipal philanthropy, with a view to improving the social character of the population.

Getting the Wrong Man

Human observation is notoriously faulty. In several books, such as "Personal Identification" and "The Expert Witness," numerous instances are reported in which persons present and wide awake when certain crimes were committed were unable to describe even with slight accuracy the appearances of those who were involved.

A book just published in London with the title, "Mistaken Identity," describes an experiment that was held before a German scientific society. A man pursued by a negro with a revolver rushed into the hall, there was a struggle, a shot and the two persons rushed out of the hall again. The president of the society, who knew that the incident had been prearranged and photographed, requested the scientists present to write a report of what had occurred.

Of this audience of scientists, all except one omitted from their reports 80 per cent of the characteristic events of the scene, and in one fourth of the reports 10 per cent of the statements were wholly imaginary. In commenting on this matter, the *British Medical Journal* points out that if men of scientific training failed in this manner, little is to be hoped of the average man or woman.

It has been suggested that persons who are called on in important criminal cases to give evidence as to personal identity of those concerned be first submitted by the court to some test of their ability to remember what they have seen, and if it is found that the person is obviously incompetent in such matters, that this be taken into account in the consideration of his testimony.

In legal annals there are several instances that prove the inability of the average person to make satisfactory personal identifications. In one instance a police organization broadcast six photographs of a criminal wanted for a serious offense. A letter was received from a rural officer stating that he had captured five of the offenders and hoped by evening to have the sixth.

In another instance, conviction of a criminal depended on the identification of a cap, which presumably he had worn at the time the offense was committed. After six witnesses had made positive identification of the cap, the attorney for the defense placed the cap on the head of the prisoner, and it was two sizes too small. The entire case fell by the weight of this incident. M. F.

INFANT MORTALITY

LAST year, according to figures compiled and published by the American Child Health Association, cities in the birth registration area in this country had a death rate of 72.6 infants per thousand births; these figures include all babies who died before reaching 1 year of age.

Two villages with populations under 25,000—Stonington, Conn., and Winona, Minn.—had the lowest records; namely, 32 per thousand. New York had the lowest rate of the ten largest cities of the country, 64 deaths per thousand. Seattle continued to maintain its supremacy among all cities in the birth registration area, with a population of at least 250,000, presenting a rate of 45. This enviable position has been held by Seattle for the last four years.

In Southern cities infant mortality rates are greatly increased because of the number of colored children, since infant deaths among negroes, particularly in the first month of life, are much more frequent than among the white population.

The lowest infant mortality records possessed by any large community are those of New Zea-

land. In that community many factors have combined to produce a rate constantly around 40. Among the factors concerned are constant emphasis on breast feeding and widespread education by highly trained public health nurses, who are thoroughly conversant with the factors involved in controlling infant mortality. No doubt the dissemination of the population and the climatic conditions play some part, but, unquestionably, constant emphasis directed along the special lines established in New Zealand must inevitably be the means of saving the lives of many babies. M. F.

NURSING SERVICE BY THE HOUR

NURSE Janet M. Gessler recently said, "Private duty nursing, as it is practiced today, is extremely costly, both patient and nurse paying heavily for the time wasted in most cases."

For several years visiting nurse associations in large cities and public health nurses in smaller communities have been demonstrating that in cases of ordinary illness, the nurse in a daily visit of an hour or two can do for the patient all that is really essential in the way of expert service. Their work has been among those families that are able to pay nothing or only a partial fee for such help.

Recently a similar service has been provided in ten or twelve cities for those that can pay an adequate fee. In Chicago the service has been launched with the aid and endorsement of the Central Council for Nursing Education and the first district of the Illinois State Association for Graduate Nurses. It is conducted from the Chicago Nurses' Club and Registry. Visits will be made, for the present, between the hours of 8:30 a. m. and 10 p. m. The fee charged ($2 for the first hour, or any fraction thereof, $1 for each consecutive hour thereafter) will, it is believed, prove adequate to maintain the service on a self-supporting basis, making it a straight business proposition. At the same time it will supply all the expert nursing actually necessary for most cases of sickness.

The need of such a nurse will be determined by the attending physician, who will direct her as to what is required. Nurses should find this type of work attractive, because it means fewer hours of work a day than full time nursing, and it means assurance that they will be actively and usefully employed every moment of the working time. The number of nurses engaged must be sufficient and their distribution throughout a city such as to make the time consumed in traveling to the patients not excessive in ratio to the actual working time.

If physician and patient can be assured of reasonably prompt response to their calls for the nurse, and of intelligent, efficient work on her part, this plan is certain to command the enthusiastic support of both the medical profession and the public. If it does this, it will be sure of success and will be an important contribution to the problem, growing daily more acute, of reducing the cost of sickness to the great group of the moderately well-to-do.

Incidentally, these by-the-hour nurses should make use of the opportunity afforded to give instruction to the members of every household to which they are called—the mother, the daughters, and even the sons and fathers—in the simpler duties of the nurse. Such items as the sweeping, dusting, ventilation and general care of the sickroom, bed making, moving and dressing the patient, giving of sponge baths, proper care of food materials and even the cooking of the simpler articles of diet, can be taught to almost any intelligent person. Every one ought to have some knowledge of these things. In emergencies, which come to every one, such knowledge sometimes may save a life and often may save suffering and distress.

Every man, woman and child should have some knowledge of the fundamentals of home nursing, as well as of first aid in accidents and emergencies. The hourly nurse can, with little effort, do much to disseminate such knowledge.

J. M. D.

LEMONS

THE virtues of the lemon have been somewhat obscured in recent years by the unusual advertising accorded to the merits of the grape fruit and the orange. No doubt the tributes to the latter member of the citrus family are well merited because of its delightful flavor, sweetness and richness in vitamins. The lemon, on the other hand, has had to overcome the disadvantages of a sour and acrid flavor which does not appeal to as many persons as the sweeter taste of the orange. The ridicule unfortunately associated with the name "lemon" since the time when it occurred to a not too brilliant comedian to connect it with a gesture indicating disdain has not aided its favor.

Astute manufacturers of ~~cosme~~tics have not overlooked a natural interest in this unusual fruit, and have prepared all sorts of substances for use on the skin and the hair, claiming for them special virtues because they contain the juice of the lemon. Unfortunately, there is not the slightest scientific evidence that lemon juice is of any value whatever in the beautification of the human form.

The attention recently given in scientific laboratories to the value of the juice and the peel of the lemon indicates that both of these contain vitamins. Vitamins A and B have been found in the rind of the fresh lemon by several authorities. This fact is more than adequate reason for the use of a fruit that serves as a constituent of one of the most popular and healthful of summer drinks and as a garnish and a flavor on the table. M. F.

POISONOUS HAIR DYES

EVER since the first woman looked into a polished surface and decided that her appearance would be greatly benefited by certain sophisticated modifications, the female sex has been tampering with its natural beauty. Among the first of the features to receive attention was the hair, long known as "woman's crowning glory" and now merely an added source of income to the barber. The first hair dyes were made from vegetable substances, then came metallic, chemical compounds, and more recently the synthetic dyes largely derived from coal tar products. Among the vegetable dyes, henna is the best known example, but indigo, wood extracts, sage and camomile have also been popular.

Dark hair dyed with henna becomes a light red; white and blond hair take on a peculiar orange color, which is extremely artificial and unattractive. The wood extracts and camomile produce all sorts of peculiar colors. They are reasonably safe, but suffer from the disadvantage that the dyes are difficult to prepare and the end result is not especially permanent. Most of these dyes do not penetrate the hair shaft, but merely coat it so that their repeated use tends to make the hair quite brittle. Metallic dyes include combinations of lead, silver, copper, tin and other metals. All metallic hair dyes, according to Doctor McCafferty, who has written extensively on the subject, in a special journal on diseases of the skin, must be considered as potentially dangerous when used for any length of time. The material may be absorbed into the body and the patient so saturated with metallic poison that he develops serious symptoms.

Most of the dye substances offered on the market and advertised in publications are combinations of henna with metallic substances. The dye action depends principally on the pyrogallol and on the metal, with just enough henna present to permit the manufacturer to use the name "henna dye."

The most common dye used today is the synthetic drug known as paraphenylendiamin. Many persons are especially sensitive to this drug and develop severe eruptions following its use. In certain instances eruptions on the back of the neck and on the arms follow the wearing of furs dyed with this substance. In Germany, the dye must always be marked with a *poison* label and most European countries have followed that example. In this country, legislatures are only beginning to consider legislation of a similar character. If a person is sensitive to paraphenylendiamin, his scalp and face will begin to tingle and itch after its application, and this will be followed, in from ten to twelve hours, by a swelling and blistering of the skin. The eyelids also may swell to such an extent that the person is unable to see. Most of the cosmetic establishments use this dye for their work. The treatment given by most physicians consists in wet dressings of boric acid solutions and in small doses of x-ray to the regions concerned. Following the subsidence of the symptoms soothing creams are applied.

Dr. McCafferty points out that every substance used as a dye remover is a dangerous poison, which, if it does not injure the person using it, at least makes the hair extremely brittle. It is his belief that dye removers should be legislated out of the beauty shops. M. F.

The Elf *in the* Apple Tree

A Children's Story
Written and Illustrated

By
Elizabeth Blaine Jenkins

Pook just longed to see her sitting up in the apple tree, with elfin wings.

IT WAS the first week in September, and a little elf Pook sat high up in an apple tree and wondered what he should do next. He had splashed around in a moonlit pool trying to catch a little golden star that sparkled down in the depths. He had played hide and seek with the moonbeams, and had thrown gold dust from Black-Eyed-Susan's heart into the face of a human person, so that the person made an ugly face and said: "Acher-chew."

Pook had giggled until he quite lost his breath. He could not think of anything else to do—at least of anything that would make him giggle—so he cuddled up among the pretty, green apple leaves and went happily to sleep.

The gnarled old apple tree that stood on the top of the hill was Pook's very own home. He had found it in the springtime when it carried beautiful pink blossoms in its old gray arms. Under the rosy petals the old tree had hidden fairy-like apples no bigger than the head of a pin. These baby apples had grown quite big, much bigger than Pook's head, and the sun and wind had painted their cheeks a beautiful red. Now the old tree looked like a little old lady who had been to market and had filled her basket with rosy red fruit.

Pook could sit in the top of the tree and see far down the village street where the church spire pointed its long finger to the skies. He could see the pretty little houses grouped around the church, like old gray sheep around their shepherd. He loved to watch the smoke curl upward from the red chimneys and follow the winds over roof tops and down the hill. He could look down the long green hill and see the schoolhouse nestled in a thicket of maple trees.

Every morning the schoolhouse bell sang "Ding dong, hurry along!" And all the little children ran out of the houses and went down the hill to school. Then Pook always scampered to the topmost limb and watched the girls and boys skip merrily by, carrying their books to school.

The little girls passed in twoses and the little boys passed in threeses, but the one Pook liked the best of all was a little girl who always passed by her very own self. Her hair was short and ruffly-gold, and when she walked she danced, and when she talked she sang, so she was a very merry little girl indeed. Pook just longed to see her sitting up in the apple tree, just his size, and with elfin wings, so she could play with him.

When the little girl went by, she always looked up into the tree and said: "I do wish I had a nice, big apple to eat when lunch time comes."

Then Pook would puff up with happiness and push a big, red apple out of the tree, so that it would roll along at the little girl's feet. The

little girl would run after it and say: "Oh, thank you, Mrs. Apple tree!" Pook did not at all mind being called an apple tree!

When the skies were gray and when rain slapped the pools and dripped from the leaves, Pook would dance among the apple leaves with the rain, and splatter the faces of the boys who walked in threeses.

Then the boys would shout, "Look out; it is still raining under the old apple tree," when it wasn't really raining at all.

When the sky was bright and blue and when the North Wind shooed the red and gold leaves over the meadow and down the hill, Pook would drop golden apple leaves down one by one.

Then the little girls who walked in twoses would say, "See how brown the leaves are! We can build bonfires soon."

But when the little girl who walked by her very own self went by, Pook always gave her a big, juicy, rosy-red apple, and did nothing at all except to say, "What very, very pinky-rosy cheeks that rosy-pink little girl has." Pretty soon you will guess what helped to make her cheeks so pretty.

The lovely September days went by one by one, while the red and golden leaves danced like gay little gypsies over the fields and away. At night the bonfires stuck out their red tongues in the dusk, while the children shouted merrily and heaped the fallen leaves. But one day something happened which Pook did not like at all. A big man with whiskers on his face and a basket and a ladder in his hands came over the hill and began to pick the beautiful red apples on Pook's beautiful, beautiful tree.

Pook was very angry. He poked twigs into Whisker Man's eyes. He tickled Whisker Man's ears. He put a grasshopper in Whisker Man's whiskers! But that man just went on picking Pook's apples.

There were only three big apples left on the tree, so Pook just had to do something quick; so he crossed his fingers and shouted: "Witch lady, witch lady, one, two, three. Change Pook into a bumble bee!"

Right away quick, Pook was changed into a big, plump, golden and black bumble bee. He said "Zoom, zoom, zoom," and stung Whisker Man on the very tip of his long nose.

Whisker Man slapped hard at bumble bee, so Pook shouted: "Witch lady, witch lady, one, two, three. Change me back into little me!"

Then there was not any bumble bee for Whisker Man to slap, so Whisker Man held his nose with one hand and his basket of apples with the other, and ran home to his wife. That left Pook all alone in his beautiful tree with three big, luscious, rosy-red apples hanging on the highest limb.

The next day the little girl who walked all alone went by singing a pretty tune. Her short curls danced in the wind, and Pook thought she was the prettiest little girl in the world, so he tumbled two big apples right into the walk at her feet. "Wee, wee, wee," squealed the little girl in delight; then she said: "Thank you! I love red apples. You are the nicest apple tree in town."

"She called me an apple tree," giggled Pook merrily, as the little girl went down the hill to the schoolhouse in the hollow. Pook looked at the last apple on the tree and sighed profoundly, a very big sigh. "I have only one apple left to give the little girl who walks by herself," said he. This made him feel very sad, for he loved to give that little girl apples to take to school, so she could eat an apple with her noon lunch.

The next day was a beautiful blue day with flocks of white clouds roaming in the sky, like little lost sheep, but the old North Wind was full of mischief. He shooed the clouds into a corner where they huddled in a frightened heap; then he blew the old apple tree now this way, now that, so that it had no peace at all. Pook sprawled his little elfin legs over the apple and held fast. "Poof—woo!" blustered the angry North Wind.

That poof—woo was so powerful that it blew Pook and the apple right off the tree, and away they flew on the back of the old North Wind. Bump, they hit the top of the hill. Then bumpity bump, they went down the hill.

The three oak trees in the hollow rustled: "Here comes Pook, riding down the hill on an apple."

The fairies giggled: "Look at naughty Pook taking an apple-ride."

The other little elves squealed: "Come on, let's catch Pook and shut him up in the woodpecker's nest!"

But they did not catch Pook, for he bumped all the way down the hill and into the pretty little schoolhouse in the hollow. Thump! Pook and the apple bounded through the open window and rolled over the schoolroom floor. Pook just had time to change himself into a bumble bee and fly to the top of a great dictionary that stood in a corner.

Now the little girl who walked by herself was standing up very straight, saying her lesson. She was singing sweetly: "Ap—ple, apple." Then the apple came through the window, just as if it knew its own name. All the children squealed in delight, and the little girl who

walked by herself squealed louder than any one else.

"That apple rolled down the hill from my nice apple tree! I suspect it thought I wanted one," giggled the little girl, as she picked up that runaway apple.

The teacher said: "I am so glad it did. Now I can teach you a very nice lesson about apples."

All the little children sat up very straight and folded their hands.

The teacher said: "Who can tell me what apples are good for?"

"Apple pie," said the little girls who walked in twoses.

"Apple dumplings," said the little boys who walked in threeses.

The little girl who walked by herself said a very long speech: "Apples are good for boys and girls. Every day when I pass the tree at the top of the hill it gives me an apple. I eat it for lunch, because my mama says apples are the best things for children to eat. It makes little children's cheeks pink and soft and pretty; my mama says so."

"Your mama is exactly right," said the teacher. "Apples will help to make your cheeks soft and pink, if you eat one every day at lunch time. You need only to look at Janey Mary's pink cheeks; Janey Mary has eaten an apple for her lunch every day for a very long, long time."

"I gave it to her!" shouted Pook proudly. But the teacher and the boys who walked in threeses and the girls who walked in twoses could not understand elf talk, so they said: "Just hear how that bumble bee can bumble! I suspect he came in on the apple."

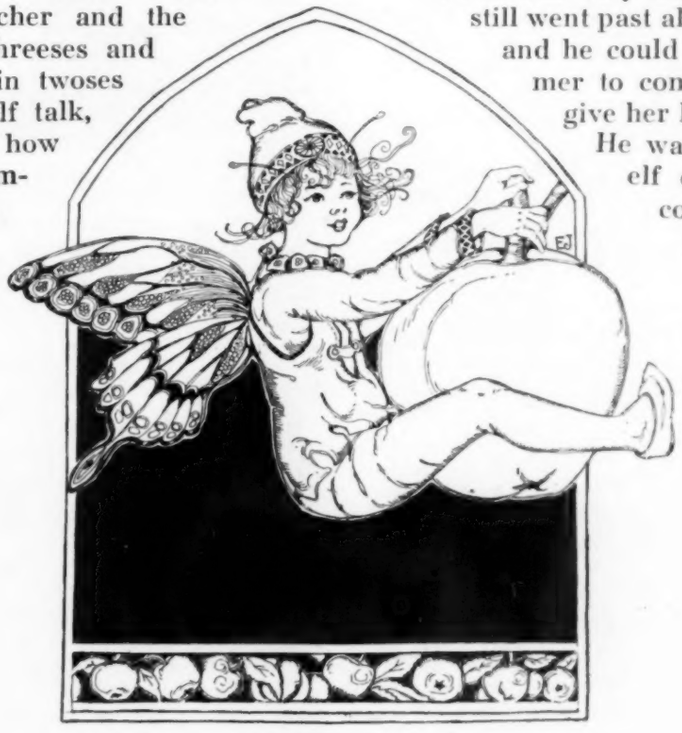
The little girl who walked by herself said: "Don't hurt that bumble bee. He lives in my apple tree, and I just love everything that lives in my apple tree."

This made Pook feel so happy that he bumbled very hard and fell off the dictionary, so the little girl who walked by herself had to help Pook to crawl upon her pencil, so he could fly away. Out of the window he flew and back to the old apple tree. There he sat on a limb and made himself into an elf again, as soon as he found breath enough to ask the witch lady's permission.

The old apple tree had given away all her beautiful red, juicy apples, and the North Wind had blown her leaves over the hills and far away, but she stood still, lifting her beggar-like arms to the gray autumn sky. The clouds dropped little cold, white snowflakes into them, until they were filled with soft white snow, but the old tree murmured: "I will hold the snow in my arms, because Pook says the little girl that walks by herself loves to see me all trimmed in white. But some day the South Wind will come again and fill my arms with flowers."

The old tree was quite right, for before Pook awakened from his long winter nap, he heard the drip, drip of melting snow, and he heard the first robin singing far down the village street.

Pook was very happy, for the little girl still went past all by her very own self, and he could hardly wait for summer to come again, so he could give her lots and lots of apples. He was as happy as a little elf could be, because he could help to keep the pink in her cheeks.



Pook sprawled his little elfin over the apple and held fast.

Suggestions for Coloring This Page with Crayon

Make the beets dark red, the leaves dark green, and the jars light green. Color the man's garment blue, and the rug over his shoulder red, gold and blue. Make the other men's garments various bright colors. The walls and turrets should be brown, behind green bushes and grass.

THE BEET

IN EARLY times the beet grew wild along the whole Mediterranean coast. In Persia, the juice was pressed from the leaves and rubbed on the forehead to cure headaches. Later, the Persians began to eat the leaves, but the sweet red root was not used much before 1600. In Germany the beet was first used to make sugar. It was introduced into England from Germany in the 18th century and now is known all over the world, and is used both as a vegetable and as a source of sugar.

Duplicates of this poster mailed to any address, postpaid, at 40 cents a dozen. No orders for less than a dozen.

New Books *on* Health

Reviews of Interest to General Reader, Parent and Teacher

POPULAR ENCYCLOPEDIA OF HEALTH

By Lee K. Frankel and Donald B. Armstrong, Metropolitan Life Insurance Company. Pp. 366, with illustrations. Price, $3.50. Albert and Charles Boni, New York. 1926.

AMONG the popular works of the past that decorated the center-table in the family parlor were the family bible and the household medical book. No doubt the former still maintains its wonted prestige, but the latter has passed into the limbo into which are consigned all of the outworn devices of a past century.

The dangers of the household medical book were no doubt best expressed by the warning of the physician to a hypochondriac to beware lest some day he die of a misprint. The ancient tome to which we herewith refer contained in some thousands of pages discussions of all of the ills to which humanity may be heir and outlines on anatomy, physiology and other sciences which made them of little or no use to the average reader.

The health educators of the Metropolitan Life Insurance Company have planned a book to supersede the household medical book of the past. The volume is arranged in a-b-c- order. It is written in simple language, and it discusses most of the questions that are likely to arise in the minds of persons who are willing to pay some attention to personal and general hygiene. As might be expected, the book is little concerned with diagnosis, but much concerned with expositions of the more common disorders. The authors quote freely from the works of others and provide an adequate bibliography of the sources from which they quote.

A few of the topics concerned seem to have been added for the general interest of the reader rather than for any particularly utility to the resident of this continent; for example, beriberi and bubonic plague.

An unusual feature for a work of this type is the various sections devoted to definitions and descriptions of the methods of the various cults engaged in the diagnosis and treatment of disease in this country. These explanations are so worded as to aid the intelligent reader in securing sound medical information. In the same way, there are abstract discussions of dental clinics, infant mortality, housing and other subjects of social medical interest.

The book may be generally recommended for its soundness and readability. As an encyclopedic reference, it is rather inadequate since it fails to discuss many topics under proper alphabetic headings. The lack of a detailed index, which might aid the reader to some extent in locating points covered in the more extensive articles, is an obvious omission. M. F.

HYGIENE OF THE HOME

By John J. Mullowney, M.D. Pp. 195. Price, $2.00. Christopher Publishing House, Boston.

THE simple advice that all persons ought to have concerning the ordinary care of the human body is presented by Dr. Mullowney in a straightforward manner, but without any apparent literary artistry. He has obviously jotted these notes from time to time in the midst of an otherwise busy career. He has collected rather indiscriminately a number of trite health proverbs and maxims, and he has toward the whole matter of health education not so much the scientific and utilitarian point of view as the rather moralistic conception that characterizes the health teaching of the past generation.

The book contains a chapter on the indications and uses of various drugs, which is completely out of place in such a volume. Finally, there are chapters on the gospel of deep breathing and on religion, which are merely attempts to palliate fundamentalism.

The second half of the book is concerned with sex education, teaching the sane point of view that this is definitely a function of the parents and that such instruction should not be shifted to the school. On the other hand, the author has apparently not kept abreast of either the modern attitude toward such instruction or the facts on which such instruction should be based. Special chapters are devoted to the instruction of children at various ages, the plan followed concerning largely the gradual translation of interest from plants and animals to the human being. There is a bitter arraignment of alcohol and of sex interest.

The book shows much material of value, but it is in no sense of the word an adequate presentation of the field that it covers. M. F.

HYGIENE OF SEX

By Max von Gruber. Authorized English translation. Cloth. Pp. 169. Price, $2.00. Williams and Wilkins Company, Baltimore. 1926.

THIS book, which has been widely read in Europe, is now made available for English readers. It discusses physiology and hygiene of sex much more frankly than is the custom of English writers. There is no beating around the bush in the discussion of the sexual relations. The author calls a spade a spade and leaves no room for misinterpretation of his meaning. But he speaks with scientific accuracy.

This is not a book to be put into the hands of children, but it is an informative and useful discussion for parents. It will serve as a guide to them in their own conduct and aid them greatly in conveying the truth about sex matters to their children. This parents must do very early in these days if they are to forestall the evil effects of vulgar misinformation, which is bound to come to almost every child when he begins to attend school, and very often even earlier than the school age.

The physiology of reproduction from fertilization to birth, the truths about heredity and breeding are discussed in language intelligible to the nonmedical reader. The organs of sex are described both as to structure and function and then follows a frank, sane and impres-

sive discussion of the sexual instinct, its proper exercise, the result of excesses and the more common aberrations of the sexual instinct.

There is a growing feeling that accurate, sound information about the sexual organs, their functions and hygiene is an essential requisite for sane, wholesome conduct. Von Gruber's "Hygiene of Sex" is one of the best and most useful of the books that have appeared in this field. J. M. D.

PARENTHOOD AND THE NEWER PSYCHOLOGY

By Frank Howard Richardson, A.B., M.D. Pp. 194. Price, $1.75. G. P. Putnam's Sons, New York.

DR. RICHARDSON aims in this volume to give in clear, understandable terms an explanation of the newer attitude toward the mental side of the child's life, and to show parents how, by the application of this knowledge, they may better understand their own children.

As a specialist in the diseases of children, Dr. Richardson has observed numerous instances of suffering in children due to lack of parental comprehension. It is realized that parents do not wish to be unjust, but that they are simply ignorant in these matters. Indeed, the self-reproach of the parent is sufficient justification for an attempt to aid by kindly advice.

Dr. Richardson recognizes the complexities of Freudian psychology and the hopelessness of permitting the average reader to thread his way unguided through its mazes. He attempts first to orient the reader and to make real the relationship of sex life to development. One may question the advisability of having the mother do everything possible to direct the love of the child away from herself and to other persons, but every one realizes that a too intense fixation by the child on either of his parents may lead eventually to countless family disturbances and innumerable secondary manifestations. Dr. Richardson also attempts to describe the subconscious mind, but with no better success than has attended the efforts of a dozen other medical-psychologic writers.

Once the ground-work of Freudianism, which underlies the first four chapters, is passed, the reader comes upon sections on the home and the family, education and discipline, which are suggestive and conservative. A special chapter dealing with the instruction of the child in sex matters is no more inspiring and conclusive than other attempts in this most difficult field. The final chapter on religious instruction indicates that the author is as much at sea as those whom he would advise in attempting to determine at this stage of the world's knowledge the exact part that religion should play in juvenile education. M. F.

HAY FEVER AND ASTHMA

By Ray M. Balyeat, A.M., M.D. Pp. 190. Illustrated. Price, $2.00. F. A. Davis Company, Philadelphia.

A BOOK prepared by Dr. Balyeat for reference by both patients and physicians has the usual fault of such volumes in that it is neither fish nor fowl; the material planned for the physician is hardly suitable for the patient, and vice versa.

A brief history of our knowledge of the diseases concerned is followed by a presentation of the various plant and other sources of materials to which patients may be sensitive. Then comes a section on treatment, in which the author indicates by detailed diagrams the manner in which the patient may himself administer adrenalin for overcoming acute attacks. With this is a section on diet. Between, there are several chapters devoted to case reports largely successful in their outcome, which constitute no mean comment on the medical skill with which these cases were handled. M. F.

HYGIENE AND SANITATION

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert. Eighth edition, enlarged and revised. Pp. 616. Illustrated. Cloth. Price, $4. Lea & Febiger, Philadelphia, 1926.

IN THE enlarged and revised Egbert's manual, improvements have been made in the text from the standpoint of the modern knowledge in hygiene and preventive medicine. A degree of conservatism has been maintained in making the changes in the new volume and it is evident that much emphasis is still placed on environmental sanitation, such as ventilation, water supply, sewage disposal, effective drainage, use of disinfectants; and on personal hygiene, such as bathing, exercise and clothing.

However, there has been added a chapter on the transmission of disease, placing proper emphasis on the various modes of transfer of infection. This adds greatly to the value of the text for modern teaching and supplements the practical discussion in the preceding chapter on causes of infection. These chapters are preliminary to the consideration of the cause of immunity and of methods that may be employed for protecting a person against infection. A subject of growing importance in this country is tourist sanitation and hygiene, applicable to vacation periods; this has been amply considered. Some stress is placed on the modern conception of prenatal hygiene, habit formation and social hygiene.

The thoroughness with which the book has been revised and the additions made make the text especially useful in presenting the principles of hygiene and preventive medicine to the college student. W. S. L.

IDLE HOURS

THE IDLE HOURS OF A VICTORIOUS INVALID. By Lane Crauford. Pp. 245. Price, 10 shillings, 6 pence. Chapman and Hall, London.

"I WONDER what a chronic invalid thinks about."

The question is answered in a number of light essays by Lane Crauford, who had a disease of the spine and lay for many months in the frame that orthopedic surgeons use in the treatment of such conditions. This invalid was apparently one of those who enjoy ill health, not in the sense of the neurasthenic, but in the sense of those who are able to overcome all sorts of trials and tribulations by the right point of view.

The personal reminiscences of physicians consulted, the many anecdotes of consultation and operating rooms, the story of anesthesia, the author's views of books and reading for the invalid and his outlook on life make this a desirable volume for any invalid, and a most interesting book for the physician that wants the patient's point of view. M. F.

NURSERY GUIDE

By Louis W. Sauer, Ph.D., M.D. Pp. 206, with 22 illustrations. Cloth. Price, $2. C. V. Mosby Company, St. Louis, 1926.

THE demand for a second edition of this nursery guide within three years is evidence of its popularity among the numerous similar books for mothers. The book is printed in a little larger size, and there is a considerable increase of text, including advice on conditions pertaining to the preschool child as well as to the infant. Several new illustrations have been added.

The book is one that can be recommended by physicians to mothers and is one of the very good books of its class. J. M. D.

News *and* Views *from the Field of Health*

HOT PACK IN HOME CANNING

The hot pack in home canning advocated by the bureau of home economics of the U. S. Department of Agriculture is just what the name implies. It is a method of packing fruits and vegetables in the containers ready for processing in boiling water or under steam pressure; it is not a complete method of canning. The hot pack helps to cut down the chances of spoilage, but it is the processing that follows that destroys the most troublesome bacteria. The hot pack is recommended by the department for some fruits and all vegetables.

The hot pack is in no sense a revival of the old-fashioned open kettle canning. By that method the food was cooked until tender and supposedly free of bacteria in an open vessel, then filled into sterilized jars, sealed airtight, and stored.

Unfortunately into the jars with the food went bacteria from the air, from ladles used in filling, and sometimes from hands or cloths that accidentally got in the way. Sometimes these bacteria were sufficient to cause spoilage, sometimes not. It was chiefly a matter of luck.

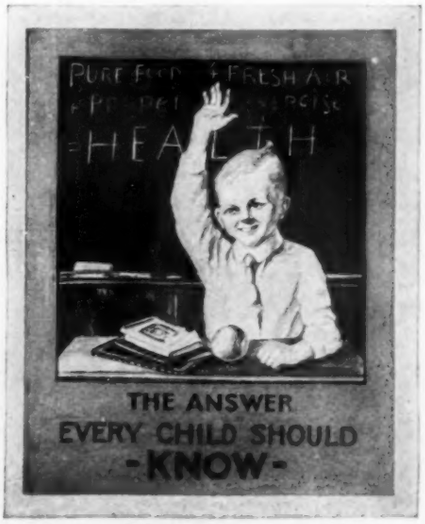
The hot pack followed by processing in water bath or steam pressure canner is an essentially different and much surer method. The food is packed hot; then it is processed in sealed containers. This heat of processing kills the bacteria that were in the food when it was packed, and the air-tight seal prevents any more bacteria from entering. Complete directions for the home canning of fruits and vegetables by the latest scientific methods will be supplied by the department on request.

EYESTRAIN IN INDUSTRY

No one can work efficiently without normal vision, nor can he work when correct vision requires too great effort. Consequently employers have found it to their advantage to protect their employees from eyestrain and to have abnormal vision corrected when it already exists. Faulty illumination is one of the most important causes of eyestrain and lowered efficiency, says Joshua Eyre Hannum in *Industrial Psychology*.

Light may be too bright or too dim; it may come from the wrong direction; it may flicker; or it may shine directly in the eyes. The light source may have too large a candle power, making it too bright or too great in volume; or it may be too near the eyes or the center of the field of vision. The contrast between the light source and its darker background may be too great.

The time of exposure to a given light source for a given field of vision may be too long. Light sources of less brightness and lower candle power should be used for a person remaining in one position for a long time. Close work continued for long periods is a large cause of eyestrain. More eyestrain occurs among close workers than among any other group, and over 50 per cent of such workers who were examined had failed at some time during their career.



Poster by Marguerite Cope, Alhambra High School, Alhambra, Calif.

HOLD TOWN RESPONSIBLE FOR TYPHOID

For the first time in Ontario, the judge of the supreme court has rendered a verdict against a municipality for typhoid due to neglect in protecting the water supply.

A woman living in Owen Sound contracted typhoid in the autumn of 1925. The evidence showed that the water supply of the town was polluted and that the city authorities not only failed to observe the warnings of the health department but assured the public that the water was safe. The plaintiff showed that she drank no other water, used pasteurized milk, did not eat ice cream, that no flies gained access to her residence, and that four other members of the household who drank boiled water escaped infection.

The judge rendered a verdict of $2,000 and costs in favor of the plaintiff.

DISPOSING OF PETS DURING VACATION

Stray dogs and cats are a nuisance and a menace to the neighborhood and to other pets that are properly taken care of, says the health department of the District of Columbia. The danger is particularly great because these stray animals are apt to develop rabies and then infect animals and human beings.

All animals that are not desired should be turned over to the city poundmaster for humane destruction. If you are going on your vacation, give your pet to a friend or send for the poundmaster to dispose of him. Do not turn him loose on the street, both for his sake and for that of your neighbors, advises the health department.

HONOR X-RAY TUBE INVENTOR

The man who invented the x-ray tube that is now used in almost all hospitals and laboratories, Dr. W. D. Coolidge, has been awarded the Howard N. Potts gold medal of the Franklin Institute. His invention of the vacuum tube has simplified and revolutionized the production of x-rays.

Underwood and Underwood

WORKERS EXERCISE

Twice a day employees of this industrial concern line up for ten minutes' exercise under the direction of a competent instructor. The firm feels that the benefit to the workers is worth the loss of time.

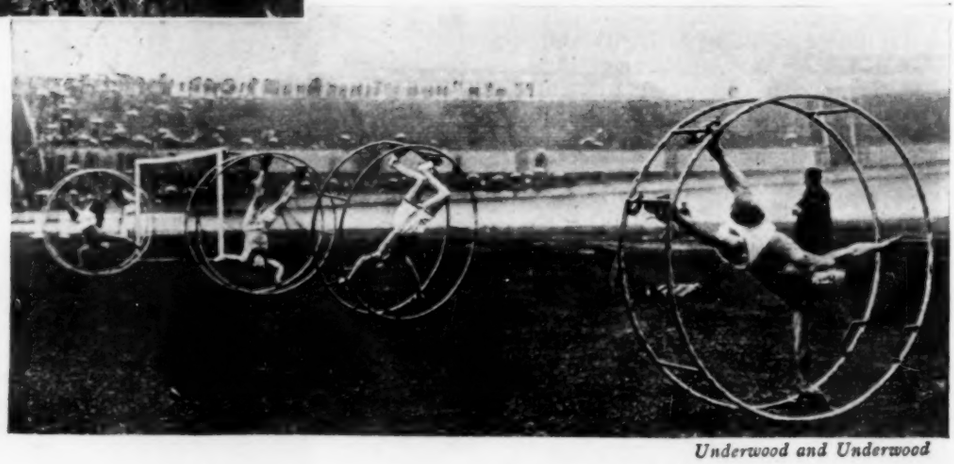
Underwood and Underwood

NEARING THE SUMMIT

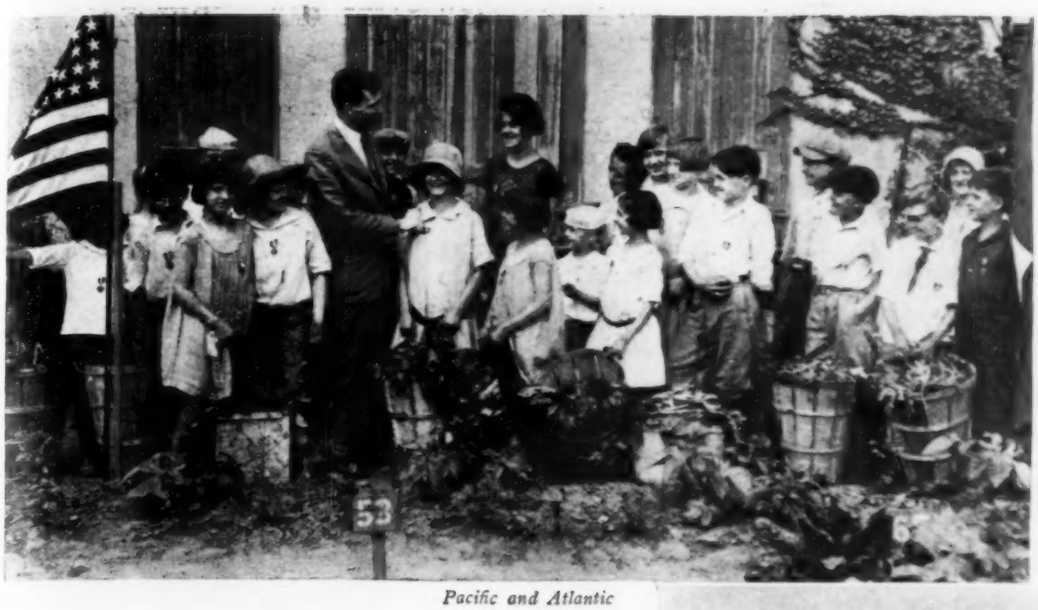
Mountain climbers develop strong muscles and steady nerves as a result of their strenuous outdoor life.

THE RACE STARTS

A human cat-in-the-wheel race has been introduced into German athletic associations. The picture shows the start of such a race.



Underwood and Underwood



Pacific and Atlantic

PRIZES FOR ALL

The young gardeners in the group above are being awarded prizes for the fine vegetables they themselves have grown, while at the right are four 2 year olds who have graduated as 100 per cent babies from a child health center.

Pacific and Atlantic

SCRIMMAGE PRACTICE

The first hint of fall brought these boys from their swim in the ocean to practice football on the beach.

Pacific and Atlantic

SUITABLE JOBS FOR AGED WORKERS

Certain jobs are hazardous for aged workers, yet workers who have grown old in service must be given some sort of work. To help solve this problem, L. J. Carey lists suitable and unsuitable jobs in an article in the *National Safety News*.

DANGEROUS WORK FOR MEN OVER 50 OR 60

Driving, caring for horses or trucking.
Loading, piling or handling raw material.
Lumbering and logging.
Molding (too much heavy lifting).
Any work on scaffolds or elevated platforms or which requires climbing.
Millwright.
Oiler (exceptionally dangerous).
Any work which requires stooping, lifting or handling of heavy objects.
Pick and shovel work.
Work in yards and around tracks.
Any job that has an occupational disease hazard or excessive heat.
Night watchman (never).

SUITABLE WORK FOR SKILLED AGED WORKERS

Inspector.
Expert repairman.
Checker.
Tool dresser.
Jobs in stock or tool departments.
Elevator operator.
Salvage department.

SUITABLE WORK FOR UNSKILLED AGED WORKERS

Foreman of yard or rough work.
Sweeper in light manufacturing plants.
Gate or pump tender.
Elevator operator; care of grounds.
Assistant to storekeeper.
Rough bench work, grinding or inspection.
Counting, sorting, packing parts.
Rough assembly work.
Handling light material.
Messenger.
Rough carpenter or painter (not on scaffolds).
Simple clerical work.
Crossing watchman.
Signal man.
Almost any kind of simple repetition work at which a man can sit as well as stand and which does not require handling of heavy parts.

PROPER AUTO SIGNALS WILL PREVENT CRASHES

Many automobile accidents are due to the fact that a driver does not know what the other motorist is going to do, says Lew R. Palmer, vice president of the National Safety Council. If motorists will give one another the proper signals at the right time there should be a reduction in crashes.

Codes of arm signals have been adopted in different cities which vary in details but are all based on extending the left arm. Some authorities recommend only one signal—the left arm extended horizontally—whether the driver intends to stop or make a right or left turn. This will caution the driver to slow down and watch the vehicle ahead of him. It is claimed that more than one signal is likely to cause confusion. The main point to remember, however, is to give some form of warning to the driver behind you.

Learn the code which is recommended by the traffic authorities of your city and never forget to use it. Mechanical signals, such as stop lights, provide a good warning when working properly but these should always be supplemented by arm signals.

Arm signals should always be given when:

1. Stopping.
2. Pulling away from the curb.
3. Turning at street intersections.

In addition to giving the signal when making a left turn or pulling out from the curb, take a quick glance to the left and rear to see that the way is clear. Another vehicle about to pass on your left may run into you if the driver does not get your signal.

FIGHTING HOOKWORM IN PORTO RICO

From 85 to 95 per cent of the rural and from 45 to 50 per cent of the urban population of Porto Rico is infested with hookworm, and the sufferers are in a high degree incapacitated by the resulting anemia, says Dr. J. G. Bajandas, chief of the bureau of rural sanitation of the Department of Health of Porto Rico.

The moderately sick people of Porto Rico carry 200 worms each. Each parasite can produce 10,000 eggs a day, or a total of a million eggs for each victim of the disease.

These figures seem appalling, but if the plan outlined by experts is consistently carried out the soil of Porto Rico will be free from infestation at no late date and the rural population freed from this loathsome plague.

The larva of the hookworm lives only six weeks under ordinary conditions. If the constant breeding of fresh larvae is cut off by the proper treatment of infested persons, and soil pollution is arrested by the universal construction and use of suitable latrines—measures now being enforced by the bureau—there is every reason to believe that with the cooperation of the public, anemia, which, in Porto Rico, is synonymous with hookworm disease, will soon be abolished.

NEW ASSOCIATION OF SOCIAL WORKERS

After four years of service, the Section on Psychiatric Social Work of the American Association of Hospital Social Workers has formally disbanded. The members believed that the greatest developments in recent years in psychiatric social work have been outside of the hospital field and more closely allied to general social work. They have, therefore, organized a new, independent body, the American Association of Psychiatric Social Workers.

MEDICAL SERVICE AT SEA BY RADIO

Since the sending of the first SOS the radio has been the means of bringing relief to ships in distress and saving the lives of all aboard. Now a new form of relief and life-saving has been made possible by the radio. The medical officers of the U. S. Public Health Service are giving medical advice by radio to ships at sea that have no physician aboard, reports *The World's Health* in a recent article.

One of the biggest problems in connection with the health of seamen is the lack of adequate medical care on small ships that have no physician. Captains and mates are required to know methods of first aid treatment, and every ship of the American merchant marine is required to carry a standard medicine chest.

These aids to the sailor's health are now being supplemented by the new radio service. The advice is given from certain marine hospitals and occasionally from other ships carrying physicians. The treatment is given in language intelligible to laymen, and with regard to the facilities which the standard medicine chests provide for carrying it out.

The first case was treated on March 8, 1922, and resulted in the saving of a man's life. A reply from the ship after carrying out the advice stated: "Patient improved—thanks."

Numerous radio requests for treatment come for advice on all kinds of ill health, from minor injuries to serious illnesses and accidents involving possible loss of life.

AFTER-CARE IMPORTANT FOR RHEUMATIC CHILD

The need for provision for the after-care of rheumatic children has not been recognized as widely as it should be, according to the report of a special committee of the British Medical Association. Such children should have prolonged institutional care so that they can have plenty of sunlight and fresh air, controlled rest and education. The committee advises the establishment of such institutions in many of the large cities.

Investigation and correction of housing conditions, with special attention to damp in dwellings, is also recommended by the committee as a means of prevention of rheumatic disease in children: The exact organism that causes rheumatic infection is not yet known, and more work must be done in this field. Children whose tonsils have been removed have a milder type of the infection with relatively slight heart disturbance.

The gospel of soap and water.

Hygienic eating.

These are three Chinese health habit charts that are doing much to improve sanitary conditions and to check disease.

To prevent heavenly flowers (smallpox), be vaccinated at once.

TEST REACTION TIME OF AUTO DRIVERS

Some persons react quickly and accurately to a danger signal; others react more slowly, or are apt to do the wrong thing when a sudden crisis arises.

The ones who are prone to step on the gas instead of the brake of an auto when the situation demands a sudden stop are a menace to the safety of all who ride on the public highways. Psychologists have devised tests that will determine, with reasonable accuracy, which persons will make quick-reacting, competent drivers.

An attempt will probably be made to have such tests required of every applicant for a driver's license, as well as the tests of vision and hearing which are being advocated by the New York state commissioner of motor vehicles. As a result of such an examination, many who now drive may be denied the privilege, but there may also be a reduction in the present alarming number of traffic accidents.

CREAMERIES CONDUCT NUTRITION CLINIC

In order to prove to the community the value of milk and other dairy products, a creamery association recently established a nutritional clinic for the school-age children of its stockholders, employees and consumers.

The clinic is held twice a week in charge of a pediatrician and a social nurse. The average gain in weight of malnourished children after attending the clinic was from one and one-half to two and one-half times higher than that of average normal children in the same period of time.

In the last year over 2,000 children attended, the total registration being 367.

The scope of the nutrition clinic is limited to treatment of malnourished children, but often other defects have been brought to light through the clinic and in such cases the patient has been referred to the family physician. Both parents and children are highly appreciative of the work that has been done and the improvement in the children's health has been remarkable, according to the report in *The Milk Dealer.*

PROTECTION FROM TYPHOID FEVER

The army medical officers boast that they have forgotten how to treat typhoid fever, since inoculation has become universal. The number of cases has been so greatly reduced since 1911, when inoculation was made compulsory, that they can very well make such a boast.

If this method of protection has been so successful in the army, it will be equally so among the rest of the population, thinks the health commissioner of Oklahoma. Since a large number of people are touring all over the country, the danger of infection is greatly increased. Sanitary conditions cannot always be relied on, but inoculation gives absolute protection.

Whether one tours or stays at home, the wise person will take advantage of this simple safety measure and have himself and his family inoculated.

MYSTERIOUS MALADY WIPED OUT

A rare occurrence is the defeat of a disease by a government edict, yet that is what has happened in Germany. About two years ago a mysterious sickness broke out among the fishermen along the stretch of Baltic coast known as the Haff. It was called the Haff sickness and threatened to ruin the fishing industry. Now it has been conquered.

The symptoms were extreme pain and paralysis of the leg muscles; it attacked the men while they were out in their boats, usually early in the morning while the mists still hung over the water. Recovery was brought about by a few days on shore, but as soon as the men went out to fish again, they suffered a repetition of the disease. The sickness did not resemble a regular epidemic, nor could it be traced to eating spoiled fish or seafood, for the persons that stayed on shore were not affected.

At length the cause was found. The sickness was really arsenic poisoning. Factories on the shore discharged into the water great quantities of waste that contained arsenic. This was altered into a gas by some of the organisms living in the water and, as a gas, rose with the morning mists to plague the fishermen.

The arsenic present in the factory materials was only an impurity, and an edict was passed requiring the factories to use other materials with a lower percentage of arsenic. Within a few months the mysterious Haff sickness had vanished, according to the report in *Science.*

Questions *and* Answers

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed.

Dog Days

To the Editor:—Is it dangerous for one to go in bathing during the so-called dog days, and how long do these days last?

A. W., Wisconsin.

Answer.—In ancient times the term dog days was applied to the period in which the Dog Star rises with the sun. To this conjunction was attributed the sultry weather at that time of the year, and the diseases that were then prevalent.

As to the conjunction, it does not occur at the same time in all latitudes and is constantly changing in the same region. There has been much variation in the calendar as to the beginning limit of dog days, ranging from as early as July 6 to as late as July 30.

Popularly, the term dog days is supposed to indicate the period during which dogs are especially liable to go mad. In many waters certain algae and other vegetable growths are abundant at this time and make the water foul and sometimes bad smelling. Such waters should be avoided for swimming, though they are not nearly so dangerous as water contaminated with human sewage.

Bad effects may follow swimming when one enters the water while overheated, as from exercise. In clean water and under proper conditions, swimming in hot weather is not dangerous but is wholesome and healthful.

Decayed Teeth

To the Editor:—One of our small sons has bad teeth; the doubles have decayed and broken to pieces. What should we do to prevent his second teeth from being poor? Does lime water help the teeth? He is 7 years old. What foods are good to help the teeth?

A. G. J., Kansas.

Answer.—Efforts to prevent poor teeth should be exercised long before the seventh year, as the second teeth are forming in the jaws at birth. However, there are certain foods that help to build strong teeth; among them are all of the fresh vegetables, such as lettuce, spinach, beets, corn and cabbage; the fresh fruits, such as oranges and apples; the coarse breads, such as rye, entire wheat and bran; and, of course, plenty of milk.

Lime water included in the diet after infancy does not do much good. Cod liver oil given during the winter months has been found to be of some value. The boy should be put in the hands of a good dentist.

Climate for Tuberculosis

To the Editor:—My husband died three months ago of tuberculosis, which became active four years ago after a serious operation followed by pneumonia. We have three children, 12, 9 and 1½ years old. We have taken every precaution to keep them from being infected since we knew he had it, but in the home it would be hard to keep them from getting any germs. I have been told that I should not take the children back to Emporia, Kan., to live but should stay in the West where it is over 2,000 feet and dry. It would be much easier for me if I could go back where I am acquainted and could take some training to be a teacher. Would you advise my doing so? The three children take their build and physical strength after my side of the house, and they are all better built physically than the average. The two older children sleep outdoors at night. They are never sick and have never taken the influenza when there was an epidemic.

F. M., Colorado.

Answer.—The chief factor to be considered is whether the children have not already been infected with tuberculosis through contact with their father. If they are now well and healthy, as far as can be determined by careful examination, it only remains to see that they live under good conditions and that they are properly nourished.

If they are at present well, there is no valid reason why they cannot be removed to Emporia. It is always to be remembered, however, that any disease that they may develop must be regarded with suspicion if it does not pass within the usual time for the recovery from such disease. Measles, whooping cough and so-called bronchitis not infrequently call forth a latent tuberculosis in a child who has been regarded as well. Influenza, typhoid fever and malaria that do not run a normal course are sometimes really unrecognized tuberculosis.

Ulcer of the Stomach

To the Editor:—I am a young man of 21 and should like to know about two ailments of the stomach. 1. What are the symptoms and causes of ulcer of the stomach, and how may it be cured? 2. What are the symptoms and causes of hyperacidity of the stomach? How is it cured?

J. W. G., Pennsylvania.

Answer.—1. The usual symptoms of ulcer of the stomach are a discomfort in the upper abdomen, which may be a dull aching or gnawing sensation, or a sharp tearing or darting pain. Often there is heartburn, which, as a rule, comes on from one to three hours after eating, and is usually relieved by the taking of soda or other alkalies or of food.

The pain is occasionally felt in the back, is aggravated by highly seasoned foods, coffee and tobacco, and is relieved by such foods as milk and puréed vegetables. The patient may occasionally awaken in the early hours of the morning with distress similar to that which comes on after meals; this is usually relieved by forced vomiting or by taking an alkaline powder.

The exact cause of ulcer of the stomach is not known, but there are numerous theories.

The cure in the earlier stages may be effected by medical means. The more severe cases require surgical measures. If it is a surgical condition, either removal of the ulcer or the establishment of new openings between the stomach and bowels or both may be advisable. When medical treatment only is undertaken, the patient is put to bed for a period of from three to five weeks, with frequent feedings, starting

with small amounts of milk and gradually increasing to a fairly full and maintenance diet. At the same time alkaline powders are given at frequent intervals.

This diet and the powders must be kept up sometimes for periods of months and years, until it is absolutely certain that a clinical cure has been brought about. The removal of all infected foci is of paramount importance in the ultimate cure of any ulcer.

2. The symptoms of hyperacidity of the stomach are similar to those of ulcer and can only be differentiated by means of the x-ray and various other tests.

The causes of hyperacidity of the stomach are similar to those of ulcer. Long-standing constipation predisposes to hyperacidity, and it often accompanies Bright's disease, long-standing high blood pressure, and chronic disease of the appendix. There are numerous other causes of hyperacidity.

Infection of Hip Socket Joint

To the Editor:—A girl of 14 recently developed an infection of the hip socket joint. The family physician diagnosed it at first as sciatic rheumatism. Next he had an x-ray picture made, and this showed a dark spot on the socket bone the size of a 25 cent piece. He then put a plaster cast on the girl, which extends from waist to foot on the right side. He intends to keep this on all summer. The pain has not lessened, and this unusual use of a cast frightens the patient, causing loss of appetite and sleeplessness. The doctor fears tuberculosis of the bone may develop. I should like to have you answer the following questions: 1. Is this plaster cast necessary? 2. Would iodine in some form tend to prevent tuberculosis? 3. If the ligament that holds the hip joint together had been injured would it show dark in an x-ray picture? She has been a strong, healthy farm girl, used to horseback riding, and may have been injured recently or some time ago in riding.

H. S., Illinois.

Answer.—It is impossible to interpret the x-ray findings from the description of a spot, so one must remain in doubt as to the fact of an infection and the type.

If it is a tuberculous infection, the cast is quite necessary and should be used with occasional renewals for many months, perhaps two or three years. If it is a nontuberculous infection, the cast may also be indicated, with the prospect of a more speedy recovery as far as recovery is to occur. This is not an unusual use of a cast; it is the usual type of treatment.

2. Iodine as a drug is not known to prevent tuberculosis. A limited amount of iodine, usually obtained through the food or drink, is necessary to maintain the body in the best physiologic condition.

3. In all probability, if the ligament that holds the hip joint together had been injured, it would not show in an x-ray picture. The diagnosis of hip-joint disease is made by a combined study of clinical symptoms and x-ray appearances.

Blond Hair

To the Editor:—I have blond hair that is starting to darken. Is there anything I can use on my hair without injuring it that will keep it from becoming that nondescript shade? A friend suggested camomile tea, but I prefer my hair to darken rather than use anything that I do not know about or that will injure the hair. A. M., New Jersey.

Answer.—There is no drug that can be used to restore a light color to the hair except peroxide of hydrogen or a similar preparation that depends on oxygen for its action.

All of these preparations if used persistently tend to give the hair a rather coarse, straw-like character, and the bleaching is, as a rule, readily seen to be due to the use of artificial agents.

Thyroid Deficiency and Low Metabolic Rate

To the Editor:—What can be done in a condition in which the basal metabolism is —15? Would deficiency in thyroid gland cause an excess of hair on the body? If the extract of thyroid is given, would the hair disappear or grow less rapidly?

R. W., Pennsylvania.

Answer.—The deficiency of thyroid gland secretion might be responsible for a low metabolic rate and for excessive growth of hair, but an accurate diagnosis cannot be based on the two signs alone.

The person should be carefully examined by a skilful physician, and thyroid extract should not be taken except on his advice and under his direction.

Eyes: Opacities of the Vitreous

To the Editor:—Can you give me any information concerning the cause of vitreous opacities forming in the eye? Do they ever become numerous enough to impair vision? K. R. M., Arizona.

Answer.—A core is necessary to a golf ball to maintain the shape of the ball under the stress and strain of the game, and a core is equally necessary to the eyeball to maintain the shape. But the difference is that the core of the eyeball has to be absolutely transparent in order to permit the unhindered passage of light rays to the perceiving part of the eye, the retina.

This core is known as the vitreous. It is a gelatinous mass that more nearly resembles cold clear chicken broth than anything else, and it fills the rear four fifths of the eyeball. Under ordinary circumstances, it is absolutely transparent to light. But under certain conditions of injury or inflammation that involves the rear of the eye, some of the red cells of the circulating blood enter the vitreous, frequently accompanied by small particles of fibrin. This is usually associated with a change in the consistency of the vitreous, which becomes slightly more fluid than usual.

These cells or fibrin strings float freely in the vitreous, and, when the eye is moved from or into certain positions, they float across the line of vision and cast a shadow on the retina. The shadows are more apparent when the background on which the eye is gazing is of a uniform monotone, such as a cloudless sky.

As a rule, the floating particles present the appearance of a small gnat or a spider web, and in the beginning are annoying to their possessor. But, as time goes on, they usually shrink and become smaller and at the same time less black. As long as the attention is riveted on the particles, they are an annoyance; but when their importance or rather lack of importance is fully understood, they gradually cease to be a constant source of worry.

Of course, in a few cases, and fortunately only a few, the small particles are the forerunners of a serious hemorrhage into the vitreous that usually imperils sight. Local treatment is of only small value for the ordinary small floaters.

Prolapse of the Stomach

To the Editor:—I have a severe case of prolapse of the stomach and intestines, causing much disturbance through gas. Is there any way in which I can help myself? How can I gain in weight? S., Texas.

Answer.—Unless the person has been very carefully examined by a physician, we do not see how it is possible for her to know she has prolapse of the stomach, and, if so, whether or not it has anything to do with her symptoms.

Prolapse of the stomach is regarded as of much less importance than was the case a few years ago, as it has been found that many persons whose stomachs extend well below the navel go through life without any symptoms whatsoever,

the pecularity being discovered only after death or when some surgical operation reveals it.

It is rarely advisable to operate for this condition. If the inquirer really feels it has anything to do with her light weight, she should consult a competent physician and follow his advice.

Delatone

To the Editor:—Can you tell me if Delatone, which is sold for the purpose of removing hair from face or arms, is harmful?

K. H., Michigan.

Answer.—Here is what the pamphlet "Cosmetic Nostrums," prepared and issued by the Bureau of Investigation of the American Medical Association, has to say about this product:

"Delatone is a gray powder of unpleasant odor. According to the Report of the Connecticut Agricultural Experiment Station for 1914, it is a mixture of about 19.35 per cent barium sulphide, 1.63 per cent barium sulphate, 66.29 per cent starch, 7.85 per cent water and volatile matter, with 4.88 per cent. undetermined matter."

This means that Delatone, like most of the products sold for removing hair, is of the sulphide type. Such preparations, of course, do not permanently destroy the hair. All sulphide hair removers are likely to cause more or less irritation of the skin, depending to some extent on the way in which they are used and to an even greater extent on the tolerance of the skin of the person using them.

Convulsions

To the Editor:—My nephew, aged 14, had a convulsion the last of March, which lasted two hours. The last of June he had another; it lasted half an hour. He was taken to the doctor again and examined. They found he was a little stooped, 3 pounds overweight, and needed to be circumcised and to have his tonsils removed. He has had an operation for both things. Do you think his trouble could have caused the convulsions, and is there danger of their continuing? He is a very bright boy and never has had any severe illness. Would you advise a nerve specialist?

J. MacL., New York.

Answer.—In the absence of a personal examination it would not be possible for any one to determine the cause and character of the convulsions described.

It may be that the difficulty with the tonsils and prepuce, which have now been corrected, had something to do with the spasms. If they should continue, however, a thorough examination should be made to determine if there is some other cause. Epilepsy, of course, always comes to mind in connection with any convulsions occurring in otherwise healthy children of that age.

Whether or not the advice of a physician who devotes himself exclusively to the diseases of the nervous system is needed is something which the family doctor is best prepared to decide. If he feels such consultation is advisable at any time, he will doubtless so inform the parents.

Prolapse of the Rectum

To the Editor:—I am 26 years old. From the age of 9 or 10, I have had prolapse of the rectum. I had no pain, but often the stools were covered with blood. At 20 I was operated on and the prolapse made much shorter, but it still protrudes at every movement of the bowels, and once in a while it bleeds. From the time of the operation, I have been troubled with mucous colitis. Certain foods have a stimulating effect on the mucous membrane, for at times the secretion is excessive, and I have to go to stool continually in order to get relief. I have heard that there is no remedy for this condition. Is this true? I weigh 110 pounds and my height is 5 feet 7 inches. Do you think that the foregoing ailments have an effect on my condition of underweight?

L. R., Indiana.

Answer.—Mucous colitis is a condition that can be greatly improved by proper diet.

It is likely that the diarrhea and prolapsed bowel may have an effect on the underweight condition. Both of these conditions should be corrected by proper treatment. The questioner should have the advice of a good physician.

Congestion in Breathing Apparatus

To the Editor:—For the past three years I have been troubled with congestion some place in my breathing apparatus. During the extremely cold days of winter and the cool summer nights, I experience a noticeable congestion in my chest and wheeze much like a person afflicted with asthma. This also occurs when I am exercising heavily. It seems that all my breathing organs are stuffed with a heavy mucus; this mucus is profuse, and I am forced to expectorate continually. What can I do to eliminate this profuse flow of mucus? I am 20 years old and have never had any serious illness.

A. M. L., Iowa.

Answer.—In the absence of a personal examination it is not possible for any one to determine the condition that causes the breathing difficulty.

The description suggests that the person has some trouble with the sinuses communicating with the nose. Such sinus trouble might readily produce a discharge of mucus, be aggravated by cold weather and cause the wheezing.

The best suggestion is that the person consult a good physician with large experience in this field.

Aluminum Ware vs. Enamel Ware

To the Editor:—When I was a young man my father would not have enameled cooking utensils in the house. He declared that the enamel would chip and get into the body through cooking, causing ulcers and more serious troubles. At that time aluminum cooking utensils were just coming into prominent use. We had our home furnished with the aluminum dishes and since having a home of my own we have always used aluminum. A few days ago I read in an article on aluminum the following: "The claim is made that the increased cases of cancer of the stomach are due to the cooking of food in aluminum ware. Boil water in a porcelain kettle and in an aluminum kettle and pour separately into clear glass jars. The aluminum boiled water will be cloudy with an aluminum precipitate, while the water boiled in the porcelain kettle will be clear. It is claimed that minute quantities of aluminum particles taken into the system are poisonous and set up inflammations from which ulcers and cancers may develop."

G. W. A., California.

Answer.—Charges have been made in various quarters that poisoning by foods cooked in aluminum vessels is possible. However, inquiry of recognized authorities fails to discover a single case of aluminum poisoning that has occurred in this way.

Aluminum utensils are now used widely not only in the household, but in large manufacturing establishments and are as safe as utensils made of any other material. Aluminum is not poisonous, as are metals like lead.

Statements that have been made in reference to enamel ware are greatly exaggerated. This matter was investigated by Dr. G. W. Monier-Williams in England two years ago. A brief summary of his report was printed in an editorial of *The Journal* of the American Medical Association for April 25, 1925. Dr. G. W. Monier-Williams concludes that "the probability that undesirable constituents in significant amounts may be dissolved from enamel hollow ware during the ordinary processes of cooking may be regarded as remote."

It is extremely unlikely that any chips of enamel ever get into the food in such a way as to produce ulcers or other serious trouble.